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Vol. VII

April, 1915

No. IV

SOUTH DAKOTA  
State College of Agriculture  
and Mechanic Arts

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BULLETIN

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ANNUAL CATALOG, 1914-1915  
with Announcements for the Year 1915-1916

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Published Quarterly by  
THE SOUTH DAKOTA STATE COLLEGE  
Brookings, S. D.

Entered as second-class matter August 10, 1908, at the post-office at Brookings, S. D., under Act of July 16, 1904

## THE COLLEGE BULLETIN

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The South Dakota State College Bulletin is published quarterly by authority of the Regents of Education.

The Bulletin contains information in detail relative to the entrance requirements of the different courses of instruction, the schedules of study, lists of instructors of the institution and its administration, equipment, organizations, publications, funds, students' expenses, scholarships, prizes, etc.

The institution includes the following college departments: Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture and Forestry, Veterinary Medicine, Home Economics and Domestic Art, Mechanical, Electrical and Civil Engineering, English, Modern Languages, History and Political Science, Philosophy, Mathematics and Astronomy, Physics, Botany, Entomology and Nature Study, Zoology, Chemistry, Pharmacy, Music, Art, Military Science and Tactics and Commercial Science.

There are also the Preparatory Department, the Agricultural Experiment Station and the School of Agriculture.

Additional short special courses of instruction are given in Agriculture, Dairying, Home Economics and Steam Engineering. Correspondence courses are also being arranged in Agriculture, Nature Study and Home Economics. Bulletins are sent free, postage paid, on request. The request should indicate the department concerning which information is desired.

Address: The President, State College, Brookings, South Dakota.



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Statement of the Ownership, Management, Circulation, Etc.

of South Dakota State College of Agriculture and Mechanic Arts  
Bulletin published quarterly at Brookings, South Dakota, required  
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Name of

Post Office Address.

Editor, G. L. Brown, Dean of College . . . . . Brookings, South Dakota

Publisher, South Dakota State College of  
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Owners, South Dakota State College of  
Agriculture and Mechanic Arts . . . . . Brookings, South Dakota

Known bondholders, mortgagees, and other security holders, holding  
1 per cent or more of total amount of bonds, mortgages, or other  
securities: None.

ELLWOOD C. PERISHO,  
President of College.

Sworn to and subscribed before me this 10th day of March, 1915.

R. A. LARSON,  
Notary Public.

(Seal)

(My commission expires June 5, 1917.)



## Calendar of 1915-16

### FIRST SEMESTER

1915.

June 7-July 16—Six weeks Summer School.

September 20-21—Entrance examinations and registration.

September 22—Work of first semester begins at 8 o'clock a. m.

November 1—Last day for announcing subjects of theses.

November 1—School of Agriculture opens.

November 25-26—Thanksgiving recess.

December 22—Christmas vacation begins at 4:15 p. m.

1916.

January 4—Christmas vacation ends at 8:00 a. m.

January 31-February 4—Examination week.

### SECOND SEMESTER

February 8—Second semester begins at 8:00 a. m.

March 23—School of Agriculture closes.

May 22—Senior vacation begins.

May 29-June 2—Examination week.

June 4—Baccalaureate Sunday.

June 7—Commencement exercises at 10:30 a. m.

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### Calendar of Short Courses

December 13-17—One week course for cream testers.

January 4-June 2—Course in traction engineering.

January 4-March 24—Three months creamery course.

December 27-January 1—Farm and home course.

### **Regents of Education**

Hon. Albert M. Anderson.....	Sturgis
Hon. T. W. Dwight.....	Sioux Falls
Hon. August Frieberg .....	Beresford
Hon. Frank Anderson.....	Webster
Hon. J. W. Campbell.....	Huron

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### **Officers of the Board**

Hon. T. W. Dwight.....	President
Hon. I. D. Aldrich .....	Secretary
Hon. A. W. Ewert (State Treasurer).....	Treasurer

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### **Regents' Committee for the College**

Hon. T. W. Dwight

Hon. J. W. Campbell

**\*Faculty**

**ELLWOOD CHAPPELL PERISHO, A. M., M. S., LL. D., President.**

B. S., Earlham College, 1887; A. M., Earlham College, 1889; Professor of Mathematics, Guilford College, North Carolina, 1888-1892; scholar, University of Chicago, 1893-1894; fellow, 1894-1895; M. S., University of Chicago, 1895; Professor of Geology, State School, Platteville, Wis., 1895-1903; Professor of Geology, University of South Dakota, and State Geologist, 1903-1914; Dean, College of Arts and Sciences, University of South Dakota, 1907-1914; present position since August, 1914.

**JAMES HENRY SHEPARD, B. S., Professor of Chemistry.**

B. S., University of Michigan, 1875; post-graduate student in University of Michigan, 1881-1882; High School Instructor in Natural Sciences, Ypsilanti, Michigan, 1882-1886; present position since 1888.

**HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

**NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.**

B. S., Iowa Agricultural College, 1887; M. S. Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor in Horticulture, Iowa Agricultural College, 1891-1895; studied in Europe, 1894; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898 and 1906-1907; to Siberia, Turkestan and Algiers, 1908-1909; for South Dakota, to Siberia, 1913; present position since 1895.

**HUBERT BERTON MATHEWS, M. S., Professor of Physics.**

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1896-1899; Professor of Physics and Electrical Engineering, 1899-1909; Vice-President, 1904-1906; present position since 1909.

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\*With the exception of the president, the names occur in the order of appointment.

**BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.**

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Instructor in Pharmacy, South Dakota Agricultural College, 1895; present position since 1896.

**GEORGE LINCOLN BROWN, Ph. D., Dean, Vice-President, and Professor of Mathematics.**

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, 1897-1910; Acting President South Dakota State College, summer and fall of 1908; Dean of the faculty, 1910; Vice-President, 1913; Acting President, February 1 to August 1, 1914; present position since August 1, 1914.

**ADA BERTHA CALDWELL, Professor of Industrial Art.**

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; student summer course Handicraft Guild, Minneapolis, 1905, 1906 and 1907; student Commonwealth Art School, Maine, during summer, 1910; present position since 1899.

**ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.**

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; student, University of Wisconsin, 1898, and summer session, 1907; Instructor in American History, University of Nebraska, summer session, 1909; present position since 1901.

**ROBERT BLACKWOOD FORSEE, Pe. P., Principal of Preparatory Department.**

Principal of Pedagogy, Western College, Missouri, 1888; Principal of Schools at Elgin, Mo., 1889-1891; at Steffenville, 1892-1893; at Estelline, South Dakota, 1895-1896; County Superintendent of Schools, Hamlin County, South Dakota, 1896-1900; present position since 1901.



**JAMES WILBUR WILSON, M. S. A.,** Director of the Experiment Station and Professor of Animal Husbandry.

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture, Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

**WILLIAM HOWARD POWERS, A. B., A. M.,** Librarian and Associate Professor of English.

A. B., Miami University, 1891; A. M., Harvard University, 1899; student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Harwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; member State Library Commission, 1913—; present position since 1905.

**CHRISTIAN LARSEN, M. S. A.,** Professor of Dairy Husbandry.

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; studied European dairying, 1900; Dairy Instructor, Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

**MADISON CLAIR BATES, A. M.,** Professor of English.

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; Scholar in English, Graduate School, Columbia University, 1909-1910; present position since 1907.

**BYRON BRIGGS BRACKETT, A. M., Ph. D.,** Professor of Electrical Engineering.

A. B., Syracuse University, 1890; A. M., Syracuse University, 1893; Certificate of Proficiency in Electrical Engineering, Johns Hopkins University, 1895; Ph. D., Johns Hopkins University, 1897; Teacher of Mathematics, Dickinson Seminary, Williamsport, Pa., 1890-1892; Teacher of Higher Mathematics and Mechanical Drawing, Collegiate Department of Adelphi Academy, Brooklyn, N. Y., 1892-1893; student-instructor, Electrical Engineering Department of Johns Hopkins University, 1894-1897; Instructor in Electrical Engineering, Union College, 1897-1898; Teacher of Physics, Eastern High School, Washington, D. C., 1898-1900; Instructor in Electrical Science, Rutgers College, 1901-1903; Professor of Physics and Elec-

trical Engineering, Clarkson School of Technology, 1903-1908; Professor of Electrical Engineering, Clarkson School of Technology, 1908-1909; Inspector of Torpedo Cable for U. S. Army, summer of 1898; Electrical Engineer for Rowland Telegraphic Company, Baltimore, Md., 1900-1901; present position since 1909.

**NOLA K. FROMME, B. S., Assistant Principal, School of Agriculture.**

B. S. in Domestic Science, Ohio State University, 1905; Instructor in Home Economics, South Dakota State College of Agriculture and Mechanic Arts, 1907-1909; present position since 1909.

**HARRY C. SEVERIN, B. A., M. A., Professor of Entomology and Nature Study.**

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908; Fellow in Zoology and Entomology, Ohio State University, 1908-1909; Assistant to State Entomologist, Illinois, summer of 1909; present position since 1909.

**ROBERTSON COOK, M. E., Professor of Experimental Engineering.**

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; Instructor in Mechanical and Steam Engineering, 1908-1910; Member A. S. M. E. since 1914; present position since 1910.

**SHIRLEY PUTNAM MILLER, B. S., M. A., Professor of Zoology.**

B. S., South Dakota State College, 1903; M. A., University of Minnesota, 1905; student at Minnesota Sea-side Laboratory, Vancouver Island, 1902-1904; Instructor in Zoology, South Dakota State College, 1905-1908; student at the Anatomical-Biological Institute, Berlin, and the University of Munich, 1908-1910; investigator in Russian Zoological Laboratory, Villafranche, on the Mediterranean; present position since 1910.

**GEORGE ARTHUR STARRING, A. B., Agricultural Editor.**

A. B., Huron College, 1907; graduate Huron Business College; student Rochester Seminary, N. Y., 1907-1908; of University of Chicago, 1908-1909; summer quarter, University of Chicago, 1909; Instructor in Commerce and Economics, Sioux City High School, 1909-1910; Professor of Commerce, South Dakota State College, 1910; present position since 1911.

**ALBERT NASH HUME, B. S. A., M. S., Ph. D., Professor of Agronomy.**

B. S. A., Purdue University, 1900; M. S., Purdue University, 1902; Live Stock Husbandman, North Louisiana Experiment Station; Instructor in Agriculture, Wenona Agricultural Institute, 1903; Instructor, Associate, Assistant Professor of Crop Production, University of Illinois and Agricultural Experiment Station, 1904-1911; student Leipzig, Germany, winter semester, 1908-1909; student Goettingen, Germany, summer semester, 1909 to winter semester, 1910; Ph. D., Goettingen, December, 1910; present position since 1911.

**JOSEPH GLADDEN HUTTON, B. S., M. S., Associate Professor of Agronomy.**

Graduate of Indiana State Normal School, Terre Haute, 1899; S. B., University of Chicago, 1908; M. S., University of Illinois, 1910; Teacher in Indiana District Schools, 1891-1895; Assistant in Biological Laboratory, Indiana State Normal School, 1898-1899; Instructor in Physiology, Indiana State Normal School, 1899-1900; Curator's Assistant, Marine Biological Laboratory, Wood's Hole, Mass., summer, 1901; Principal of Beardstown (Ill.) High School, 1901-1903; Superintendent of Schools, Beardstown (Ill.), 1903-1908; Instructor in Psychology, Indiana State Normal School, summer, 1908; Assistant in Geology and Graduate School in Botany, Geology and Soils, University of Illinois, 1908-1911; Field Assistant, Illinois State Geological Survey, summer, 1909; present position since 1911.

**GARNETT HEDGE, Mus. Bac., Professor of Music.**

Graduated from Des Moines Musical College, Des Moines, Iowa, 1894; post-graduate in same institution, 1896; studied with Karleton Hackett, American Conservatory, Chicago, 1897-1898; taught in American Conservatory, sang with Castle Square Opera Co., and studied with Arthur Beresford, 1898-1899; taught at Heading College, Abingdon, Ill., 1899-1900; Supervisor of Public School Music, Lead and Deadwood (S. D.) schools, 1900-1901; traveled with Minneapolis Symphony Orchestra, 1908-09-10 and with Thomas Orchestra, February, 1910; studied summer 1909, with Madame Friedenburg, New York; Dean of Huron College School of Music, Huron, S. D., 1910-1912; present position since 1912.

**BENJAMIN LEE THOMPSON, B. Sc., Associate Professor of Animal Husbandry.**

B. Sc. in Agriculture, Ohio State University, 1908; Professor of Animal Husbandry and Dairying, Dunn County School of Agriculture, Menominee, Wis., 1908-1909; Instructor in Animal Husbandry, South Dakota State College, 1909-1912; present position since 1912.

**B. A. DUNBAR, Associate Professor of Chemistry.**

A. B., Ohio Wesleyan University, 1891; A. M., Ohio Wesleyan University, 1892; Instructor in Mathematics and Physics, Hillsboro Normal College, Hillsboro, Ohio, 1891-1893; Instructor in Physics, High School, Ironton, Ohio, 1893-1895; Supt. of Schools, Michigan, Wyoming, Minnesota and North Dakota, 1895-1910; student in Chemistry, University of Chicago, 1909-1910; Assistant Professor of Chemistry, South Dakota State College, 1911-1912; present position since 1912.

**CHRISTY WILLIAM MICHEL, A. M., Professor of Botany.**

A. B., Litt. B., Ohio Wesleyan University, 1904; A. M., Harvard University, 1912; elected Austin Scholar in Botany, Graduate School, Harvard University, 1911, and Scholar in Yale University, for the same year; received appointment as assistant in Botany, Harvard University, 1912, and Fellow in Botany in the University of Wisconsin; student Harvard University, second semester of 1905-06 and the year of 1911-12; Ohio State University, 1908-09; Supt. of Schools, Mercer, Ohio, 1904-05; Prof. Biology, Defiance College, 1906-1908 and 1909-1911; present position since 1912.

**HARRY W. EWING, Professor of Physical Education.**

Student University of Nebraska, Academic Courses, 1904-1907; Assistant Coach, University of Nebraska, 1910-1911; Director of Athletics, Morningside College, 1911-1912; present position since 1912.

**\*JOHN M. FULLER, B. S., Associate Professor of Dairy Husbandry.**

B. S. in dairying, Iowa State College, 1911; Associate Editor, Orange Judd Weeklies, 1911-1912; Instructor in Dairy Husbandry 1912-1913; present position since 1913.

**BERTRAM EVERETT McPROUD, A. B., A. M., Professor of Education.**

A. B., Baker University, 1900; Supt. of Schools, Oskaloosa, Kansas, 1900; Supt. City Schools, North Bend, Nebraska, 1902; A. M., Baker University, 1904; Professor of Latin, University of Puget Sound, 1904; Vice President and Professor of Latin and Pedagogy, University of Puget Sound, 1905; Instructor and Principal of the Academy, Baker University, 1907; Graduate Student in Education and Psychology, University of Chicago, summer quarter 1908; also year of 1908-09; Dean of Teachers' College and Professor of Education Nebraska Wesleyan University, 1909; present position since 1913.

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\*Resigned April 1, 1915.



**ALBERT JONES WILLIS, C. E., Professor of Civil Engineering.**

C. E., Lehigh University, 1905; Asst. Engineer of Construction and Repair, Bethlehem Steel Co., 1905-1906; Instructor in Civil Engineering, Lehigh University, 1906-1908; Instructor in Civil Engineering, Armour Institute of Technology, 1908-1910; Structural Draftsman with C. M. & St. P. R. R., summer of 1909; Structural Steel Draftsman and Checker with the Guerber Engineering Co., summers of 1910, 1911, 1912, 1914; Instructor in Civil Engineering, Cooper Union, New York City, 1910-1913; in charge of property survey and laying out of public roads in Cambria County, Pa., summer of 1913; Assoc. M. Am. Soc. C. E.; present position since 1913.

**BELLA SPENCER, A. B., Professor of Modern Languages.**

A. B., Kansas State Univ., 1899; Student of Prof. Heine, Univ. Goettingen, Germany, 1898-1899; Student of Prof. Schweizer-Siedler and Dr. Tobler, Univ. of Zurich, Zurich, Switzerland, 1899-1904; Instructor in Modern Language, City High School, Portland, Oregon, 1904-1905; Instructor in Modern Language, LaSalle-Peru Township High School, LaSalle, Ill.; present position since 1913.

**CHARLES CLINTON LIPP, D. V. M., Professor of Veterinary Medicine.**

Student Poland Union Seminary, North Eastern Ohio Normal College; D. V. M., Ohio State University, College of Veterinary Medicine; present position since 1913.

**ERNEST D. STIVERS, B. S., Professor Secondary Agricultural Education; Director of Summer School.**

B. S., Iowa State College, 1901; Science Teacher, High School, Mason City, Ia., 1901-1904; Superintendent of Schools, Parker, S. D., 1904-1910; student special work in Agriculture, Iowa State College, 1910-1911; Principal of Agricultural High School, Prescott, Arkansas, 1911-1912; Agricultural Editor, International Correspondence Schools, Scranton, Pa., 1912-1913; present position since 1913.

**CHAS. F. SCHLATTER, B. S., Professor of Commercial Science.**

B. S., Southern Iowa Normal, 1902; Instructor in Mathematics, Southern Iowa Normal, 1904-1905; Instructor in Pedagogy, Southern Iowa Normal, summer quarter, 1905; graduate Gem City Business College, 1906; student Drake University, summer quarters, 1909 and 1910; Superintendent of Schools, Dunlap, Illinois, 1906-1907, 1907-1908, and 1908-1909; Instructor in Commerce, Sioux City High School, 1909-1910; Principal Department of Commerce, La Salle-Peru Township High School, La Salle, Illinois, 1910-1911; present position since 1911.



**FRANK EMERSON BROWN, A. M., Professor of Public Speaking.**

A. B., Knox College, 1902; A. M., Knox College, 1908; Illinois Representative Interstate Oratorical Contest, St. Paul, 1902; student, Emerson College of Oratory, Boston, 1902-1903; student, University of Chicago, Summer School, 1908; Instructor in English and Oratory, Mercersburg Academy, Mercersburg, Pennsylvania, 1903-1905; Professor of Public Speaking, Drake University, 1905-1914; present position since 1914.

**VEY VALENTINE, B. S., Assistant in Hog Cholera Demonstration Work.**

B. S., South Dakota State College, 1914; Assistant in hog cholera demonstration work of College in cooperation with U. S. Dept. of Agriculture in Davison county since 1914.

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**Instructors and Assistants**

**HOWARD H. HOY, B. S., M. S., Assistant Professor of Physics and Electrical Engineering.**

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; pursued special work in electrical engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; present position since 1904.

**MAUD GODDARD, Assistant Professor of Industrial Art.**

Student Art Institute, Chicago, 1903; student Summer Course, School of Fine Arts, Minneapolis, 1907; student Chautauqua summer school, N. Y., 1909; student Commonwealth Art School, Maine, summer of 1910; present position since 1903.

**CARL CHRISTENSEN, Assistant Professor of Music, Violin and Other Instruments.**

Student under Professor Christian Madsen of Copenhagen, Denmark; also studied with C. F. Toenniges, of Davenport, Iowa, 1900-1901; with Alfred Speil, Minneapolis, 1908-1909; and with William McPhail, Minneapolis, summer of 1912; present position since 1906.

**W. ALBERT PETERSON, Mus. Bac., Assistant Professor of Music.**

Qualified as teacher, Illinois Wesleyan Conservatory, 1901; graduate American Conservatory, Chicago, 1909; post-graduate same institution, 1911; pupil of Allen Spencer, pianist, and Adolph Weidig and Geo. Colburn, harmony, counter-point, composition, etc.; Instructor, Huron College, Huron, S. D., 1911-1912; present position since 1912.

**GERTRUDE S. YOUNG, A. B., Assistant Professor of English and History.**

A. B., University of Wisconsin, 1906; present position since 1907.

**CLIFFORD N. MILLS, B. S., Assistant Professor of Mathematics.**

B. S., Franklin College, Indiana, 1910; Graduate Student Indiana University, summers 1910-12; Fellow, Indiana University, 1913-14; Completed work for A. M. Degree January, 1914; Teacher Public School Jennings Co., Indiana, 1904-05; Instructor Math. Franklin H. S., Indiana, 1908-10; Tutor Math. Franklin College, Indiana, 1908; Prof. of Math. Highland College, Kansas, 1910-13; present position since February 3, 1914.

**JOHN A. BONELL, Instructor in Shopwork.**

Student Stout Institute, 1904, and State Normal School, Oshkosh, Wis., summer 1905; Assistant and Instructor in Farm Mechanics, Marathon County School of Agriculture, Wausau, Wis., 1905-1910; attended Stout Institute, summer 1910; present position since 1910.

**HOWARD LOOMIS, A. B., Assistant in Agronomy.**

A. B., Albion College, 1909; Instructor Chemistry and Physics, Union City, Ind., High School, 1909-1910; present position since 1910.

**GUY E. YOUNGBERG, B. S., M. S., Assistant in Chemistry.**

B. S., 1906; Ph. G., 1908, and M. S., 1909, South Dakota State College; present position since 1910.

**MANLEY CHAMPLIN, B. S., Assistant Professor in Agronomy.**

B. S., South Dakota State College, 1909; Special Agent, 1909, Scientific Assistant, 1910, Collaborator, 1911, United States Department of Agriculture; present position since July, 1911.

**HOWARD W. GREGORY, B. S., Assistant in Dairy Husbandry.**

B. S. in Dairying, Oklahoma Agricultural and Mechanical College, 1912; present position since 1912.

**GEORGE PHILLIPS, Student Adviser.**

B. S., South Dakota State College, 1909; Scholar in University of Wisconsin, 1910-1911; Instructor in Mechanical Engineering, South Dakota State College, 1912-1914; present position since 1914.

**MABEL TROOIEN, B. S., Instructor in Mathematics.**

B. S., South Dakota State College, 1907; present position since 1913.

**LAURA FERGUSON, Instructor in Music.**

Studied four years with Robert Boice Carson, of Chicago; Graduate of Carson School of Music, Portland, Oregon, 1911; Solo Soprano White Temple Baptist Church, Portland, 1910; Solo Soprano Grace M. E. Church, Portland, 1911-12; Taught privately in Minneapolis, 1912-13; Soprano Soloist, Westminster Presbyterian Church, Minneapolis, 1912-13; present position since 1913.

**RUTH ALINE WOOD, B. S., Instructor in Home Economics.**

B. S., South Dakota State College, 1913; present position since 1913.

**NELLIE G. KENDALL, B. S., Instructor in English.**

B. S., South Dakota State College, 1908; present position since 1912.

**GRACE A. REVELL, B. S., Instructor in Mathematics.**

B. S., South Dakota State College, 1912; postgraduate student, South Dakota State College, 1912-1913; present position since 1913.

**EDWARD BINNEWIES, B. S., Assistant in Chemistry.**

B. S., South Dakota State College, 1913; present position since 1913.

**MATTHEW FOWLDS, B. S., Assistant in Agronomy.**

B. S., South Dakota State College, 1913; Assistant in Entomology, South Dakota State College, 1913-1914; present position since March, 1914.

**HENRY M. SHEA, Assistant in Chemistry.**

Ph. G., 1911; B. S., 1913, South Dakota State College; present position since 1913.

**SAMUEL L. SLOAN, B. S., Assistant in Agronomy.**

Student assistant in Soils Laboratory, South Dakota State College, 1912-1914; B. S., South Dakota State College, 1914; present position since 1914.

**CECILE IRENE WELCH, Instructor in Music.**

Graduate of Music Department S. D. S. C., 1908; B. S. Degree S. D. S. C., 1910; Instructor in Piano, S. D. S. C., 1911-1912; studied piano and pipe organ at New England Conservatory, Boston, Massachusetts, 1912-1913; present position since 1914.

**PERRY CLIFFORD, B. S., Assistant in Dairy Husbandry.**

B. S., South Dakota State College, 1914; present position since 1914.

**GRACE V. SOMERS, B. S., Instructor in Home Economics.**

B. S., South Dakota State College, 1913; present position since 1913.

**EDWIN H. HUNGERFORD, B. S., Assistant in Dairy Husbandry.**

B. S., Kansas State Agricultural College, 1912; graduate student, 1912-1913, and Fellow in Chemistry, 1913-1914 in same institution; present position since 1914.

**DAVID B. STEFFINS, Instructor in Mechanical Engineering.**

Student State Normal School, Winona, Minnesota, 1912-1913; graduate of the Stout Institute, 1914; student University of Wisconsin, summer 1914; present position since 1914.

**GENEVIEVE HARTGERING, B. A., Instructor in Home Economics.**

B. A., University of Minnesota, 1911; student Teachers' College, Columbia University, 1914; Special Domestic Art Teacher in Minneapolis Public School, 1913-1914; Instructor in Millinery in Evening Schools, Minneapolis, 1913-1914; Instructor in Domestic Art in Vacation Schools, Minneapolis, 1914; present position since 1914.

**JEANETTE M. PRUSIA, B. S., Instructor in Home Economics.**

B. S., Iowa State College, 1899; B. S. in Home Economics, Iowa State College, 1914; Science Teacher, Ames High School, 1900; Substitute Teacher, Public Schools, Tacoma, Washington, 1912-1913; year of post-graduate work in Home Economics, Iowa State College, 1914; Extension lecturer and instructor in Home Economics, Iowa State College, 1914; present position since September, 1914.

**GEORGE GILBERTSON, B. S., Assistant in Entomology.**

B. S., South Dakota State College, 1914; present position since 1914.

**HELEN FERGUSON, Assistant in Music.**

Graduate in Public School Music, McAlester College, 1914; present position since 1914.

**WILSON CRAMER, JR., Instructor in Animal Husbandry.**

Present position since 1914.

**DILLA E. WIMPLE, B. A., M. A., Instructor in German.**

B. A., University of South Dakota, 1904; M. A., University of South Dakota, 1906; student at Berlitz School of Modern Languages, Chicago, summer session 1904; Instructor in German, University of

South Dakota, 1904-1907; Teacher of rural schools, 1908-1909; Principal of High School, Harrisburg, S. D., 1909-10; County Superintendent of Schools, Lincoln County, S. D., 1911-1914; present position since 1914.

**CHARLOTTE ELLIOTT, B. A., M. A., Instructor in Botany.**

B. A., Leland Stanford Junior University, 1907; Assistant in High School, Flandreau, S. D., 1907-1908; Instructor in Biology and Geography, State Normal School, Spearfish, S. D., 1908-1912; post-graduate work Leland Stanford Junior University, 1912-1913; M. A., 1913.

**WILLIAM MONROE MAIR, Superintendent of Boys' and Girls' Clubs.**

Studied three years in Oberlin College and Theological Seminary; traveled in Europe one year; Principal of the Public Schools of Garretson two and a half years; County Superintendent of Schools in Minnehaha County, four years; present position since 1913.

**R. C. DITTO, Second Lieutenant 20th Infantry, U. S. Army, Professor of Military Science and Tactics.**

Mercersburg Academy, 1903; post graduate, 1904; Lafayette College, 1904-1905; Army, 1907—; Philippine Islands, 1910-1912; present position since 1914.

**WARD A. OSTRANDER, B. S., M. S., District Agricultural Agent.**

B. S., Lawrence College, 1911; M. S., University of Wisconsin, 1914; present position since 1914.

**GUY MORRISON, B. S., District Agricultural Agent.**

B. S., South Dakota State College; present position since 1914.

**C. A. MICHELS, B. S., M. S., District Agricultural Agent.**

B. S., North Dakota Agricultural College, 1909; M. S., University of Wisconsin, 1912; present position since 1914.

**VERNA M. KELLAR, Demonstrator in Home Economics.**

Present position since 1914.



In addition to the regular members of the faculty, the following persons have given special lectures and addresses before the students and faculty of the State College during the year:

Hon. T. W. Dwight Sioux Falls.  
Mrs. Cooper, Boston, Mass.  
Dr. M. J. Exner, New York, N. Y.  
Hon. Philo Hall, Brookings.  
Hon. C. L. Dotson, Sioux Falls.  
Hon. J. W. Parmley, Ipswich.  
Hon. W. C. Allen, Aberdeen.  
Dr. T. H. Coole, China.  
Hon. Frank Byrne, Pierre.  
Hon. Peter Norbeck, Redfield.  
Hon. W. A. Ronald, Mitchell.  
Secretary J. L. Childs, Kankakee, Ill.  
Judge Alva E. Taylor, Huron.  
Hon. George Farrell, Washington, D. C.  
Hon. Victor Murdock, Wichita, Kan.  
Hon. E. M. Sherman, Sioux Falls.  
Hon. F. A. Spafford, Flandreau.  
Dr. Craig S. Thoms, Moline, Ill.  
Prof. Stephen Van Benthuyzen, Mitchell.  
Hon. E. C. Issenhuth, Redfield.  
Hon. Peter Zollman, Mitchell.  
Hon. P. R. Crothers, Badger.  
Hon. A. J. Wimple, Beresford.  
Hon. John Nicol, Wetonka.  
Prof. Fred W. Merrill, Fargo, N. D.  
Dr. O. O. Smith, Pierre.  
Dr. John C. Whitten, University of Missouri.

The above list does not include the speakers upon the regular Y. M. C. A. lecture course.

## Other Officers and Employees

R. A. Larson.....	Secretary
Robert Elliott.....	Registrar
Edith Hubbart.....	Assistant Librarian
Nina A. Waters.....	Matron of Dormitory
Garrett Dolliver.....	Secretary to the President
Erastus Fjeld.....	Station Stenographer
George E. Purdy.....	Janitor and Carpenter
A. T. Larson.....	Engineer
Fred C. Stoltenberg.....	Florist

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## Faculty Committees

Faculty Committees will be announced at the beginning of the college year.

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## Members of Station Council

T. W. Dwight...	Member Regents' Committee for the College
J. W. Campbell..	Member Regents' Committee for the College
Ellwood C. Perisho.....	President of the College
James W. Wilson.....	Director and Animal Husbandman
Niels E. Hansen.....	Vice Director and Horticulturist
James H. Shepard.....	Chemist
Christian Larsen.....	Dairy Husbandman
Albert N. Hume.....	Agronomist

# General Information

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## HISTORICAL SKETCH.

**Establishment.**—An act of the Territorial Legislature approved February 21, 1881, provided that “an Agricultural College for the Territory of Dakota be established at Brookings, \* \* \* \* provided that a tract of land of not less than eighty acres be secured and donated to the Territory of Dakota.”

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was opened for use September 24, 1884.

The Enabling Act admitting the state of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the agricultural college, as provided in the acts of congress making donations of lands for such purpose. The acts of congress here referred to are, primarily, the act of July 2, 1862, known as the Morrill Act, providing that 30,000 acres of public land for each representative in congress be given to each state towards “the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts.”

By the Enabling Act of 1889 Congress granted to South Dakota for the Agricultural College 40,000 additional acres, in lieu of a grant that had been made to new states in 1841. Thus the total land grant for the Agricultural College was 160,000 acres.

In the Morrill Act of 1862, such colleges were spoken of as “Colleges of Agriculture and Mechanic Arts.” In order that the name might more nearly conform to the object for which the College was established, the legislature of 1907 changed the name from “The Agricultural College of South Dakota,” to “The State College of Agriculture and Mechanic Arts.”

The Experiment Station was organized in 1887 under the Hatch Act of Congress, which provided for the establishment of agricultural experiment stations in connection with agricultural colleges. These stations were established for the purpose of conducting experiments and research work in connection with all branches of the agricultural industries of the United States, due regard being paid to the varying conditions and needs of the respective states. It is also their object to aid in diffusing among the people useful and practical information on all subjects connected with agriculture. The South Dakota Station conducts its investigations chiefly along the following lines: live stock, veterinary science, soils, field experiments, greenhouse work, trees and small fruits, and chemistry of plant growth and foods.

The Extension Division was established to carry to the people of the state the results of the work of the College. From its earliest history the College has sent out members of its staff to help the people of the state by addressing meetings, acting as judges at fairs and for agricultural clubs, and in various other ways. The College, however, has had no money available to conduct such work in a systematic way until recently. In May, 1914, the Smith-Lever Act was passed by Congress providing \$10,000 annually to each state beginning with July 1, 1914, to be used for agricultural extension work by the State Colleges of Agriculture in cooperation with the United States Department of Agriculture. The act also provides that beginning with July 1, 1915, additional amounts which increase from year to year are to be given to the different states upon the condition that the states appropriate equal amounts to be used in connection with the national fund for extension work.

During the present fiscal year the College has organized an extension force and has placed experts in the field to conduct demonstration work in agriculture and home economics, and to organize Boys' and Girls' Clubs.

**Sources of Income.**—A joint resolution passed by the legislature of 1890 accepted the lands granted in the enabling act. These lands were not at once assigned. The Commissioner of

Public Lands reported that 64,658 acres had been selected. All have since been selected; very few have been sold. A small amount is received yearly as rental. The first income recorded was \$1,197.71, Sept. 1, 1896. As no school lands may be sold for less than ten dollars an acre, these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will probably be sufficient for the needs of the college.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved by Congress March 4, 1907, provides for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of \$5,000 for the year 1907-1908, which increased \$5,000 each year until it reached \$25,000 per annum. The College, therefore, receives \$50,000 annually from the National Government for instructional purposes.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

The Hatch Act provides that the experiment stations should receive \$15,000 annually from the National Government. This amount has been increased by the provisions of the Adams Act of 1906, so that the experiment station now receives \$30,000 a year for maintenance.

Under the Smith-Lever Act the College receives \$10,000 annually from the National Government for extension work. Under the same act during each of the next two years the College will receive \$6,167 and \$11,308 respectively on the condition that equal amounts are provided by the State to be



used with the national funds. The State Legislature of 1915 has appropriated \$25,000 and \$30,000 respectively for each of the next two years to meet this condition and for additional extension work in the State.

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### LOCATION, BUILDINGS AND EQUIPMENT

**The Location.**—The College is located upon an eminence one mile from the business center of Brookings, which has a population of about three thousand five hundred people. The city is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch making connection with the main line at this point.

Brookings is almost an ideal college town. It is lighted by electricity and has a complete water and sewer system. Its streets are lined with trees and its houses have well kept lawns abounding in ornamental shrubs and plants.

It is a city of clean morals. No saloon has been allowed within its limits for years; and the last few times when the question of allowing saloons within the city has been submitted to a vote of the people, it has been defeated by overwhelming majorities.

**The College Buildings and Grounds.**—The college campus upon and about which the college buildings are placed is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary walks and drives. Adjoining on the rear are the horticultural gardens, and to the north and northwest is the college farm.

The oldest building on the campus, called the Central Building, was erected in 1884. This and the other two old buildings, called, during recent years, the North Building and the Experiment Station Building, will in the future be given over to general class room and laboratory purposes.

The new Agricultural and Administration Building, which has been completed during the present college year, provides executive offices, an auditorium, laboratories, class rooms and offices for the various agricultural departments.

The Physics-Engineering Building is occupied by the physics and the engineering departments with their various class rooms, laboratories and shops.

The Plant Breeding Building, together with the large Greenhouse, furnishes room for the work that is being conducted by the departments of botany, horticulture and entomology.

The Chemistry-Pharmacy Building, a two-story structure, is occupied by the class rooms and laboratories of those departments.

The Creamery is a two-story building which was almost doubled in size in 1911 by an addition which was made to meet the growing demands upon this department.

The Gymnasium is a two-story building that is used for athletic exercises and military drill during the season when such work cannot be carried on outdoors. In connection with the Gymnasium a tract of land near the campus has been fitted up for outdoor exercises and sports.

Wenona Hall, a splendid brick dormitory for young ladies, stands on a site just across the street from the campus.

The legislature of 1915 appropriated \$75,000 for a new dormitory for young ladies.

The central heating and electric light plant occupies a brick structure in the rear of the campus. The buildings are all heated by steam and lighted by electricity generated in this plant.

Near the campus on the adjoining college farm are located the agricultural and the dairy barns, together with a number of smaller buildings which are devoted to agricultural purposes.

**The Farm and Horticultural Gardens.**—The college farm includes four hundred and sixty acres, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the students may witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal hus-

bandry. Practical work in experiments involving the best farming practices for this region are given the students.

The Horticultural Gardens comprise about fifty acres adjoining the campus. Here and in the Greenhouse a large amount of work in fruit propagation and plant experimentation is being carried on.

**The Laboratories, Shops and Museums.**—Well fitted laboratories and shops have been provided in all those departments where their use is made necessary by modern educational methods. The value of illustrative materials has been recognized, and numerous departments have made large collections and museums. The equipment of the various departments is described in connection with their work.

**The Library and Reading Room.**—The library, occupying rooms on the first floor of the Central Building, contains over 16,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

**The Postal Facilities.**—The College furnishes first-class postal facilities, the mail of the student being delivered at the college at convenient times during the day, making it unnecessary for them to walk to the city postoffice.

## ORGANIZATION AND GOVERNMENT

**The Board of Regents.**—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who have charge of all of the educational institutions which are maintained either wholly or in part by the state. The terms of office of the regents are each six years and expire at different times, so that the board is a continuous body. Appointments to the board are made by the Governor, with the approval of the senate, "of persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education."

Among the powers and duties of the regents as defined by law some important ones are, to employ members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

**The Faculty.**—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. The president appoints, at the beginning of each college year, certain faculty committees which take up such work

as may be assigned them by the president and faculty. The members of the Experiment Station staff are heads of the corresponding departments of instruction of the college. The members of the Extension Division are representatives of the various college departments.

In the government of the College the faculty rely chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly and maintain good behavior at all times. Students are not only under the direct supervision of the faculty while on the campus, but are responsible for their conduct wherever they may be.

In order that the work of the College may be rendered as efficient as possible and all relations made harmonious, a set of regulations, chiefly governing matters of classification, has been adopted by the faculty. No set rules are expected to cover every condition that arises, and all students should recognize the importance of co-operation with the faculty in their efforts to make college life helpful to the student body as a whole.

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## STUDENT ACTIVITIES

**Faculty Control.**—While the students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical, social and other activities, the faculty retains an advisory interest in all such matters, and has the right at any time to pass reasonable regulations for the welfare of the College.

**The Student Association.**—The athletic, debating and oratorical interests and the college paper, the *Industrial Collegian*, are under the control of the Student Association which governs these activities by means of a board of control, consisting of students and members of the faculty. This board is organized into the Athletic, the *Collegian*, and the Debating Councils, each of which directs the respective interests that come under it. A fee of three dollars a semester, or propor-



tional sums for students whose work is arranged in terms shorter than the semester, is charged for membership, which admits the holder to all student exercises under the supervision of the association and pays for a subscription to the Collegian.

**Athletics.**—Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the State Meet once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

**Oratory and Debating.**—Each year for a number of years representatives of the college have met students from other institutions in debating contests. The members of the local teams are chosen in a series of preliminary contests in which all are encouraged to take part. There has thus been aroused among the student body a large interest in this kind of work and a healthy rivalry to obtain places on the intercollegiate teams.

Credit for three hours work during one semester is given those who take part in an intercollegiate debate.

A representative of the college is sent each year to the inter-collegiate oratorical contest of the state. This student is selected by means of a local preliminary contest. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

**The Student Publications.**—The Industrial Collegian is a weekly paper published by the students of the College. It is intended to be a mirror of student life at this institution, and all phases of college activity have representatives on its staff of editors.

The Jack Rabbit is published annually by the junior class, and is a good representative and exponent of college life.

**The Literary Societies.**—The literary society is an important factor in the education of the student and all are strongly advised to take part in this kind of work. All preparatory students are expected to become members of the Franklin Society whose work is carried on under the supervision of the preparatory department, and is a preparation for the college societies.

The faculty and various citizens, recognizing the value of literary society work, have offered several trophies to be competed for by the Athenian and Miltonian Societies, which are composed of students of collegiate standing.

**The Christian Associations.**—In the state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student who stands for pure manhood and womanhood to affiliate himself or herself with them. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among the members of the student body. The Young Men's Christian Association is personally supervised by a secretary who is engaged to spend a large part of his time in directing this work. The Young Women's Christian Association is supervised by the state and international college secretaries.

**Other Student Organizations.**—Among these may be mentioned the Art Club which encourages interest in art by bringing exhibits to the College and in various other ways; the Glee Club, which often makes tours in the state; the Dramatic Club, which makes a study of some of the best dramatic literature, and presents a play each year; and the Agricultural Club, the Engineering Club, the Pharmacy Club and other organizations.

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## STUDENT EXPENSES

**Tuition and Other Fees.**—The tuition for regular work extending throughout the college year is six dollars per semester, or twelve dollars per year. For information concerning

tuition fees for work that is not arranged according to semesters, see the respective courses. A student who enrolls must pay the full tuition for the semester or term. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which the student takes work. Books and other supplies are furnished by the student.

Special fees are charged for instruction in music in the College. (See the department of music.)

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

**Estimate of Expenses.**—An estimate of the yearly expenses of a student is as follows:

Board and Room .....	\$200.00
Tuition .....	12.00
Fees in Student Association .....	6.00
Laboratory fees .....	10.00
Books and Supplies .....	25.00
Laundry Expenses .....	20.00
Incidentals .....	25.00
	<hr/>
	\$298.00

Men students are expected to purchase military uniforms which range in cost from \$16.00 to \$18.00.

While the above is considered as a reasonable estimate, many students go through the year on a less amount. Much depends upon the character of the student and the work he is taking.

**Board and Rooms.**—Good rooms and board can be obtained at private houses. A boarding club conducted in connection with the college furnishes board to the young men at a low cost, and the dormitory provides a large number of the young ladies with comfortable homes at reasonable rates. (See the following page for dormitory regulations.)

Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students. A list of approved available places for boarding or rooming can be obtained at any time from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations. If prospective students will write to the Young Men's or Young Women's Christian Association of the College, officers of these organizations will be glad to arrange to meet them at the train and help them to secure boarding and rooming places.

**The Ladies' Dormitory.**—This building is 120 by 50 feet in dimensions and three stories in height. In addition to the preceptress and other lady teachers, the matron and servants, it will provide a home for sixty women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room, while on the third floor is a recreation hall suitable for parties and plays which are attended by girls only. Two bath rooms, toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet, and a stationary wash stand with hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. The building is heated with steam, lighted by electricity, and in every respect has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattresses and pillows, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club is conducted under the supervision of an experienced matron. Every effort is made to provide wholesome fare at minimum cost to the students. The cost of table board during the last two years has been about \$3.00 a week. Payment for

board at the rate of \$3.00 per week must be made for four weeks in advance. No deduction for board will be made for less than a week's absence.

Occupants of the building will be entitled to the laundering of a limited number of articles without extra cost.

The cost of rooms in the hall varies from \$12 on the third floor to \$14 on the first floor per semester for each occupant, two in a room. This fee includes both light and heat. The room rent is payable in advance. The occupants will be expected to take care of their own room.

A student desiring room reserved for her must forward \$2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded.

**Student Labor.**—There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the College authorities to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work unless he is assured in advance of such an income.

**Scholarships.**—The following articles from the law, defining powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution. The student must present his appointment to the secretary of the College at the time of enrollment in order to obtain credit for the same.



## ENTRANCE REQUIREMENTS

**Admission.**—While students are admitted at any time and assigned to such classes as they are found best fitted to enter, it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters later he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor for assistance in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

Candidates for admission to any department of the College must be at least fourteen years of age and of good moral character.

Credit in the College may be obtained by presenting certified grades from other institutions of reputable standing or through examination. The College reserves the right, however to cancel grades accepted from other schools should the student be found deficient in the subject for which he has received credit.

The College will furnish prospective students with application blanks, which, after being filled out with certified standings and other data, should be returned to the registrar.

The first two days of the first semester are devoted to the registration of students. All students should complete their registration at this time and new students must present their credits at or before this time if they expect to be assigned a proper classification.

**Entrance Credits.**—Students will be admitted to the four-year courses, and the two-year courses in Pharmacy upon presenting credit for fifteen units of high school or other secondary school work. A unit is a subject which is taught five periods a week throughout the school year, or the equivalent of this work.

Of the fifteen units required, eleven and one-half units are in prescribed subjects, the remaining three and one-half being in optional subjects as indicated below. A student who has

graduated from a creditable high school course of four years will in general be enrolled as a member of the freshman class, but in case the prescribed subjects have not been completed, he may be required to bring up this back work.

A student may be admitted to a college class without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

For the benefit of students who are unable to attend a high school to complete the preparatory requirements, a preparatory course is maintained. Students will not be admitted to this department unless they present evidence that they have completed the work of the public schools as far as the ninth grade. For the preparatory course, see the Preparatory Department.

The list of prescribed and optional subjects are shown in the following table:

### Prescribed Units

English, four units. Not more than one year of this work should be the study of grammar; the remaining three years' work should consist of composition work and a study of some of the simpler American and English classics.

Algebra, one and a half units for engineering students, one unit for others. The fundamental operations, factoring, fractions, simple equations, involution, evolution, radicals, quadratic equations and the analysis and solutions of problems involving these principles.

Plane Geometry, one unit. The completion of this part of geometry. Special emphasis should be paid to the solutions of original problems and constructions.

Elementary Physics, one unit. One year's work covering the science as presented in the best text books. Laboratory work should accompany the text book work.

History, one and a half units. This work should follow, and not include, elementary United States History, and should

be a connected study of some of the following lines: ancient, medieval, modern, English, American history.

Civics, one half unit. A study of the constitutions of the United States and of the state, as presented in the best high schools.

Foreign Language, two units. These credits should be for two years' work in some one of the languages, German, French or Latin. In case a student is a graduate of a four-year high school course which does not include any foreign language, credits in the natural science may be substituted for these two units.

### Optional Units

The three and one-half optional units may be offered in the same lines of work as the prescribed units and in other departments, as indicated by the table below. About the only requirement made concerning the work for which credit is offered is that it should be of a reasonably high standard. The maximum credit that is allowed in each subject is indicated in the table. While no minimum is stated it is expected that a student shall have covered a reasonable amount of a subject before being given any credit in it.

	Prescribed Units	Maximum Allowed
English .....	4	4
*Algebra, thru quadratics .....	1½	1½
Plane Geometry .....	1	1
Elementary Physics .....	1	1
History, following elementary U. S. History.	1½	3
*Foreign Language, German, French or Latin	2	4
Civics .....	½	½
Science—		
Agriculture .....		1
Physiology, following Biology, Zoology		
or Botany .....		½
Botany .....		1
General Biology .....		1
Zoology .....		1
Geology .....		½
Physical Geography .....		½

Bookkeeping .....	.....	$\frac{1}{2}$
Commercial Geography .....	.....	$\frac{1}{2}$
Freehand Drawing .....	.....	$\frac{1}{2}$
Manual Training, including Mechanical Drawing .....	.....	I
Cooking .....	.....	$\frac{1}{2}$
Sewing .....	.....	$\frac{1}{2}$
Solid Geometry .....	.....	$\frac{1}{2}$

\*See above for exceptions.

## STUDIES

**The Credit Hour.**—Credit for college work is counted in credit hours. A credit hour is one hour of class or lecture work requiring an additional hour and a half in preparation. Two hours in laboratory work is counted equivalent to one hour spent in the class room.

**Registration.**—In registering for work the student is advised by a member of the faculty who helps him to make out a consistent schedule of studies. In general, students are not allowed to classify in more than twenty or less than fourteen credit hours a week. The faculty recognize that, because of differences in subjects and in the ability of students, some are able to carry a larger number of hours than others, and endeavor to assign to each student enough work to keep him reasonably busy without overloading him.

**Special Students.**—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

**Military Requirements.**—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students taking regular work in the College are required to do certain work in this department, unless excused because of physical disability or some other grave reason. Certificates of disability should be obtained from the physician whom the

College authorities have designated for such work, the College bearing the expense of the examination. For further regulations governing this work see the military department.

**Grades.**—All grades of students will hereafter be reported to the registrar by means of the letters, M, S, E, I, P and F. The letter M means that the student's work is of medium or average grade. The letter S, meaning superior, indicates that the work is above the average, but is not as high as E, which means that the student's work is excellent or so high above the average as to merit special mention. The letter I means inferior or below the average, but is higher than P, meaning passed, which indicates that the student has only a sufficient knowledge to make it unprofitable for him to repeat the subject. The letter F means that the student has failed to receive a passing grade.

**Conditioned Students.**—Any student who without good reason has failed to receive a passing grade in a reasonable amount of his work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

**Absences.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexcused absences as the faculty may deem proper. Should a student find it necessary to be late to his class he should make a satisfactory explanation to his instructor at the close of the period.

Extra credits will be required of students for absences from college duties, whether the absences are excused or not, unless the students are absent officially representing the Col-



lege. While the faculty will do all that is reasonably possible to assist students to bring up work which has been missed because of sickness or for other good reasons, they recognize the principle that even a good excuse should not stand in lieu of scholarship.

## DEGREES AND CERTIFICATES

**Degrees.**—The courses of study leading to degrees given by the College are as follows:

The two year course in Pharmacy, leading to the degree of Pharmacy Graduate. For additional work of two years leading to the degree of Bachelor of Science, see schedule of Pharmacy Course.

The four-year course in Agriculture, in which the student may specialize along the lines of animal husbandry, dairy husbandry, agronomy, horticulture and plant pathology. Upon the completion of one of these schemes, under the direction of the head of the department in which the group of electives is chosen, the student will receive the degree of Bachelor of Science.

The four-year course in Home Economics leading to the degree of Bachelor of Science.

The four-year courses in Mechanical, Electrical and Civil Engineering, leading to the degree of Bachelor of Science, (B. S.). In order to meet a constantly increasing demand for better equipped and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, Electrical Engineer, or Civil Engineer, will be conferred. This work, which is nearly all prescribed, is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The four-year course in General Science, leading to the degree of Bachelor of Science. The work of this course is

largely elective and is planned to give the student a liberal education, at the same time permitting specialization in the sciences.

The degree of Master of Science is offered to students who have received the Bachelor's degree either from this institution or from other institutions of equal rank, and who in addition have completed at least one full year's resident work, i. e., forty credit hours, in advanced study and have shown a reasonable proficiency in such work. At least two-thirds of this work must be in some one line of study, called the major work. The scheme of study presented by the student for the degree must be prescribed by the faculty committee on advanced degrees, who will outline the work in consultation with the head of the department in which the major work is taken.

It should be understood that the work for this degree cannot be subjected to rigid regulation, and that each case must be dealt with on its individual merits.

**Special Courses.**—The College also offers special courses in several important and practical lines of work. These are mentioned in other parts of the catalog under the proper headings, and are as follows:

The four-year course in the School of Agriculture.

The one-year secretarial course.

The five-months course in steam engineering.

The three-months creamery course.

The special work in vocal and instrumental music.

The special work in art.

The one-week dairy course for cream testers.

The farm and home course, for farmers and farmers' wives.

**Courses of Study.**—The work leading to a Bachelor's degree and the degree of Pharmacy Graduate is mapped out on the following pages. The conditions for entrance to these courses may be found under "Entrance Requirements." The notation immediately after the name of a subject indicates its

nature and the number of times it occurs a week, "a" referring to the class work, and "b" to the laboratory exercises. A department will not be required to give an elective unless at least five students are registered for the subject.

## Course in Agriculture

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3 .....	English	9
Chemistry, a & b 5 .....	Chemistry	1
Farm Crops, a 2 b 3 .....	Agronomy	1
Stock Judging, a 2 b 2 .....	Animal Husbandry	1
Military Tactics, 3 .....		
Elective, a 4 .....		
French, a 4 .....	French	1
German, a 4 .....	German	1

#### Second Semester—

Rhetoric, a 3 .....	English	10
Chemistry, a & b 5 .....	Chemistry	2
Farm Dairying, a 2 b 1 .....	Dairy Husbandry	1
Breeds of Live Stock, a 3 .....	Animal Husbandry	2
Veterinary Anatomy, a 2 .....	Veterinary	1
Military Tactics, 3 .....		
Elective, a 4 .....		
French, a 4 .....	French	2
German, a 4 .....	German	2

### SOPHOMORE YEAR

#### First Semester—

Botany, a 2 b 3 .....	Botany	2
Quantitative Chemistry, b 5 .....	Chemistry	3
English Literature, a 3 .....	English	17
Entomology, a 1 b 1 .....	Entomology	3
Horticulture, b 1 .....	Horticulture	1
Military Tactics, 3 .....		
Elective, a 4 .....		
French, a 4 .....	French	3
German, a 4 .....	German	3

#### Second Semester—

Botany, a 2 b 3 .....	Botany	3
Organic Chemistry, a & b 5 .....	Chemistry	11

Military Science, a 1 .....	Military Science	1
Entomology, a 1 b 2 .....	Entomology	4
Horticulture, b 1 .....	Horticulture	2
Military Tactics, 3 .....		
Elective, a 4 .....		
French, a 4 .....	French	4
German, a 4 .....	German	4

### **\*Animal Husbandry Group—Agriculture Course.**

(For Freshman and Sophomore Years, See Above)

#### **JUNIOR YEAR**

##### **First Semester—**

General Zoology, a 2 b 3 .....	Zoology	3
Soils, a & b 5 .....	Agronomy	4
Psychology a 3 .....	Education	1
Anatomy of Conformation and Soundness, a 2 ....	Veterinary	3
Animal Mechanics, a 2 .....	Veterinary	4
Elective, a 2 .....		

##### **Second Semester—**

General Zoology and Veterinary Physiology, a 2 b 3 ..	Zoology	4
Soils, a & b 5 .....	Agronomy	5
Principles of Animal Breeding, a 3 .....	Animal Husbandry	4
Animal Nutrition, a 3 .....	Animal Husbandry	5
Elective, a 3 .....		

#### **SENIOR YEAR**

##### **First Semester—**

Economics, a 3 .....	History	15
Advanced Stock Judging, a 2 .....	Animal Husbandry	3
Stock Feeding, a 3 .....	Animal Husbandry	6
Veterinary Medicine, a 3 .....	Veterinary	2
Stable Hygiene, a 3 .....	Veterinary	5
Elective, a 5 .....		

##### **Second Semester—**

Agricultural Chemistry, a 3 .....	Chemistry	6
Agricultural Economics, a 3 .....	History	16
Live Stock Management, a 2 .....	Animal Husbandry	7
Architectural Drawing, b 3 .....	Mechanical Engineering	6
Elective, a & b 9 .....		

\*The courses in Agricultural Education are so arranged that a student in this group may elect twelve hours, consisting of History of Education, Principles of Education, Organization and Administration of Education, and Principles of Teaching, thereby securing a state certificate and being prepared to teach in any high school in the state. It is quite frequently an advantage to the student to have this additional preparation for opening opportunities.

**Dairy Husbandry Group—Agriculture Course.****(For Freshman and Sophomore Years, See Above)****JUNIOR YEAR****First Semester—**

General Zoology, a 2 b 3 .....	Zoology	3
Soils, a & b 5 .....	Agronomy	4
Inspection & Testing Dairy Products, a & b 4.....		
.....	Dairy Husbandry	2
General Bacteriology, a & b 5 .....	Zoology	10

**Second Semester—**

General Zoology, a 2 b 3 .....	Zoology	4
Dairy Bacteriology, a 2 b 3 .....	Dairy Husbandry	3
Dairy Technology, a 2 b 2 .....	Dairy Husbandry	7
*Soils, a & b 5 .....	Agronomy	5
Principles of Animal Breeding, a 3 .....	Animal Husbandry	4
Elective, a & b 5 .....		

**SENIOR YEAR****First Semester—**

Factory Operation (Creamery), a 3 b 2....	Dairy Husbandry	4
Dairy Management, a 2 b 2 .....	Dairy Husbandry	6
Economics, a 3 .....	History	15
Psychology, a 3 .....	Education	1
Elective, a & b 5 .....		

**Second Semester—**

Agricultural Economics, a 3 .....	History	18
Factory Operation (Cheese), a 3 b 2.....	Dairy Husbandry	5
Elective, a & b 10 .....		

\*Elective.

**\*Agronomy Group—Agriculture Course.****(For Freshman and Sophomore Years, See Above)****JUNIOR YEAR****First Semester—**

General Zoology, a 2 b 3 .....	Zoology	3
Soils, a & b 5 .....	Agronomy	4
Elective, a & b 8 .....		

**Second Semester—**

Farm Crops, a 3 b 2 .....	Agronomy	2
General Zoology and Veterinary Physiology, a 2 b3..	Zoology	4
Soils, a & b 5 .....	Agronomy	5
Elective, a & b 3 .....		



**SENIOR YEAR****First Semester—**

Economics, a 3 .....	History	15
Psychology, a 3 .....	Education	1
Geology, a 3 b 2 .....	Agronomy	9
Elective, a & b 8 .....		

**Second Semester—**

Agricultural Economics, a 3 .....	History	18
Heredity, a 2 b 1 .....	Botany	10
Elective, a & b 12 .....		

\*The courses in Agricultural Education are so arranged that a student in this group may elect twelve hours, consisting of History of Education, Principles of Education, Organization and Administration of Education, and Principles of Teaching, thereby securing a state certificate and being prepared to teach in any high school in the state. It is quite frequently an advantage to the student to have this additional preparation for opening opportunities.

**Horticulture and Plant Pathology Group—Agriculture Course**

(For Freshman and Sophomore Years, See Above)

**JUNIOR YEAR****First Semester—**

General Zoology, a 2 b 3 .....	Zoology	3
Soils, a & b 5 .....	Agronomy	4
Mycology, a 2 b 3 .....	Botany	5
Systematic Pomology, b 1 .....	Horticulture	5
Architectural Drawing, b 3 .....	Mechanical Engineering	6

**Second Semester—**

General Zoology and Veterinary Physiology, a 2 b 3 .....	Zoology	4
Soils, a & b 5 .....	Agronomy	5
Heredity and Plant Breeding, a 2 b 1 .....	Botany	10
Plant Physiology, a 2 b 3 .....	Botany	4
Floriculture and Market Gardening, b 2 .....	Horticulture	3

**SENIOR YEAR****First Semester—**

Economics, a 3 .....	History	15
Psychology, a 3 .....	Education	1
Forestry, a 2 .....	Horticulture	4
Elective, a & b 12 .....		

**Second Semester—**

Agricultural Economics, a 3 .....	History	18
Landscape Gardening, b 2 .....	Horticulture	6
Elective, a & b 15 .....		

# Home Economics

## FRESHMAN YEAR

### First Semester—

Rhetoric, a 3 .....	English	9
Drawing, b 2 .....	Art	14
Elementary Chemistry, a & b 5 .....	Chemistry	1
Principles of Cookery, a 2 b 3 .....	Home Economics	3
Elective, a 4 .....		
French, a 4 .....	French	1
German, a 4 .....	German	1

### Second Semester—

Rhetoric, a 3 .....	English	10
Drawing, b 2 .....	Art	15
Elementary Chemistry, a & b 5 .....	Chemistry	2
Physics of Heat, a 2 .....	Physics	9
Textiles and Principles of Sewing, a 2 b 2 ..	Home Economics	10
Elective, a 4 .....		
French, a 4 .....	French	2
German, a 4 .....	German	2

## SOPHOMORE YEAR

### First Semester—

English Literature, a 3 .....	English	11
Household Chemistry, a & b 5 .....	Chemistry	8
General Botany, a 2 b 3 .....	Botany	1
Preparatory Dressmaking, a 1 b 2 .....	Home Economics	11
Elective, a 4 .....		
French, a 4 .....	French	3
German, a 4 .....	German	3

### Second Semester—

English Literature, a 3 .....	English	12
Chemistry of Foods and Nutrition, a & b 5 .....	Chemistry	4
General Botany, a 2 b 3 .....	Botany	2
Theory of Design, a 2 .....	Art	3
Elective, a 4 .....		
French, a 4 .....	French	4
German, a 4 .....	German	4

## JUNIOR YEAR

### First Semester—

English Literature, a 3 .....	English	13
History, Medieval, a 3 .....	History	7
General Zoology & Physiology, a 2 b 3 .....	Zoology	2

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Bacteriology, a & b 5 .....	Zoology	10
Psychology, a 3 .....	Education	1

**Second Semester—**

English Literature, a 3 .....	English	14
History, Modern, a 3 .....	History	8
General Zoology & Physiology, a 2 b 3 .....	Zoology	3
Advanced Dressmaking, a & b 3 .....	Home Economics	12
Serving and Dietetics, a 1 b 2 .....	Home Economics	4
Elective .....		
Ethics, a 3 .....	Education	2
Child Psychology, a 3 .....	Education	6

**SENIOR YEAR****First Semester—**

Economics, a 3 .....	History	15
Art History, a 2 .....	Art	6
Applied Design, b 2 .....	Art	4
Sanitation, a 3 .....	Home Economics	6
Home Nursing, a 3 .....	Home Economics	7
The House and Market, a 3 .....	Home Economics	8
Elective, a 3 .....		
Principles of Teaching, a 3 .....	Education	5
English Literature, a 3 .....	English	15 or 19
Nature Study, a 3 .....	Entomology	12

**Second Semester—**

Astronomy, a 3 .....	Mathematics	15
Sociology, a 3 .....	History	16
Art History, a 2 .....	Art	7
Applied Design, b 2 .....	Art	5
Special Problems in Cookery, a 1 b 2 .....	Home Economics	5
Elective, a & b 5 .....		
Bird Life, a & b 2 .....	Entomology	11
Household Insects, a 2 .....	Entomology	9
English Literature, a 3 .....	English	16 or 20
Principles of Education, a 3 .....	Education	7

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**Mechanical Engineering****FRESHMAN YEAR****First Semester—**

Rhetoric, a 3 .....	English	9
College Algebra, a 5 .....	Mathematics	8

Elementary Chemistry, a & b 5 .....	Chemistry	1
Mechanical Drawing, b 5 .....	Mechanical Engineering	5
Military Tactics, 3 .....		

**Second Semester—**

Rhetoric, a 3 .....	English	10
Plane and Spherical Trigonometry, a 5 .....	Mathematics	9
Elementary Chemistry, a & b 5 .....	Chemistry	2
Machine Shop, b 3 .....	Mechanical Engineering	3
Surveying, a & b 2 .....	Civil Engineering	1
Military Tactics, 3 .....		

**SOPHOMORE YEAR****First Semester—**

Analytic Geometry, a 5 .....	Mathematics	11
General Physics, a 3 b 2 .....	Physics	3
English Literature, a 3 .....	English	17
Machine Shop, b 5 .....	Mechanical Engineering	4
Military Tactics, 3 .....		

**Second Semester—**

Calculus, a 5 .....	Mathematics	12
General Physics, a 3 b 2 .....	Physics	4
English Literature, a 3 .....	English	18
Descriptive Geometry, a & b 1 ....	Mechanical Engineering	7
Machine Design, b 4 .....	Mechanical Engineering	8
Elements of Military Science, a 1 .....	Military	1
Military Tactics, 3 .....		

**JUNIOR YEAR****First Semester—**

Machine Design, b 2 .....	Mechanical Engineering	9
Elements of Mechanism, a 3 .....	Mechanical Engineering	16
Electricity and Magnetism, a 3 b 1 ..	Electrical Engineering	1
Hydraulics, a 3 .....	Civil Engineering	5
Analytic Mechanics and Calculus, a 5 .....	Mathematics	13
Graphic Studies, b 2 .....	Civil Engineering	3

**Second Semester—**

Analytic Mechanics, a 3 .....	Mathematics	14
Steam Engines and Thermodynamics, a 5 .....		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5 .....	Mechanical Engineering	16
Electrical Measurements, b 1 .....	Electrical Engineering	2
Dynamo Electrical Machinery, a 3 b 2..	Electrical Machinery	3

**SENIOR YEAR****First Semester—**

Masonry and Foundations, a 2 . . . .	Mechanical Engineering	27
Experimental Engineering, b 3 . . . .	Mechanical Engineering	17
Steam Boilers, a 2 . . . . .	Mechanical Engineering	13
Engineering Design, b 5 . . . . .	Mechanical Engineering	21
Highway Construction, a 2 (1915) or . . . .	Civil Engineering	4
Irrigation, a 2 (1916) . . . . .	Civil Engineering	11
Economics, a 3 . . . . .	History	15

**Second Semester—**

Experimental Engineering, b 5 . . . .	Mechanical Engineering	19
Structural Design, b 5 . . . . .	Mechanical Engineering	22
Contracts and Specifications, a 2 . . . . .	Civil Engineering	13
General Astronomy, a 3 . . . . .	Mathematics	15
Gas and Oil Engines, a 2 . . . . .	Mechanical Engineering	11

**Fifth Year Subjects in Mechanical Engineering****First Semester—**

Alternating Current, a 3 b 2 . . . . .	Electrical Engineering	4
Structural Design, b 3 . . . . .	Mechanical Engineering	21
Statics, a 2 . . . . .	Mechanical Engineering	24
Thesis, a 2 . . . . .	Mechanical Engineering	27
Elective, 5 . . . . .		

**Second Semester—**

Kinematics, b 2 . . . . .	Mechanical Engineering	14
Structural Engineering, b 2 . . . . .	Mechanical Engineering	22
Heating and Ventilation, a 2 . . . . .	Mechanical Engineering	25
Thesis, a & b 3 . . . . .	Mechanical Engineering	28
Railroad Engineering, a 3 . . . . .	Civil Engineering	19
Elective, 5 . . . . .		
Note—All Electives must be taken in the department.		

**Electrical Engineering****FRESHMAN YEAR****First Semester—**

Rhetoric, a 3 . . . . .	English	9
College Algebra, a 5 . . . . .	Mathematics	8
Elementary Chemistry, a & b 5 . . . . .	Chemistry	1
Mechanical Drawing, b 5 . . . . .	Mechanical Engineering	5
Military Tactics, 3 . . . . .		



**Second Semester—**

Rhetoric, a 3 .....	English	10
Plane and Spherical Trigonometry, a 5 .....	Mathematics	9
Elementary Chemistry, a & b 5 .....	Chemistry	2
Machine Shop, b 3 .....	Mechanical Engineering	3
Surveying, a & b 2 .....	Civil Engineering	1
Military Tactics, 3 .....		

**SOPHOMORE YEAR****First Semester—**

Analytic Geometry, a 5 .....	Mathematics	11
General Physics, a 3 b 2 .....	Physics	3
English Literature, a 3 .....	English	17
Machine Shop, b 5 .....	Mechanical Engineering	4
Military Tactics, 3 .....		

**Second Semester—**

Calculus, a 5 .....	Mathematics	12
General Physics, a 3 b 2 .....	Physics	4
English Literature, a 3 .....	English	18
Descriptive Geometry, a & b 1 .....	Mechanical Engineering	7
Machine Design, b 4 .....	Mechanical Engineering	8
Elements of Military Science, a 1 .....	Military	1
Military Tactics, 3 .....		

**JUNIOR YEAR****First Semester—**

Electricity and Magnetism, a 3 b 2 ....	Electrical Engineering	1
Machine Design, b 2 .....	Mechanical Engineering	9
Elements of Mechanism, a 3 .....	Mechanical Engineering	10
Hydraulics, a 3 .....	Civil Engineering	5
Analytic Mechanics and Calculus, a 5 .....	Mathematics	13
Graphic Statics, b 2 .....	Civil Engineering	3

**Second Semester—**

Analytic Mechanics, a 3 .....	Mathematics	14
Electrical Measurements, b 1 .....	Electrical Engineering	2
Dynamo Electric Machinery, a 3 b 2 ..	Electrical Engineering	3
Steam Engines and Thermodynamics, a 5 .....		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5 .....	Mechanical Engineering	16

**SENIOR YEAR****First Semester—**

Alternating Currents, a 3 b 2 .....	Electrical Engineering	4
Dynamo Design, b 3 .....	Electrical Engineering	5

Masonry and Foundations, a 2 . . . . .	Mechanical Engineering	27
Steam Boilers, a 2 . . . . .	Mechanical Engineering	13
Experimental Engineering, b 3 . . . . .	Mechanical Engineering	17
Economics, a 3 . . . . .	History	15

#### Second Semester—

Electric Light and Power Distribution, a 3 b 2 . . . . .	Electrical Engineering	6
Experimental Engineering, b 5 . . . . .	Mechanical Engineering	19
Contracts and Specifications, a 2 . . . . .	Civil Engineering	13
General Astronomy, a 3 . . . . .	Mathematics	15
Gas and Oil Engines, a 2 . . . . .	Mechanical Engineering	11

### Fifth Year Subjects in Electrical Engineering

#### First Semester—

Electric Traction, a 3 b 2 . . . . .	Electrical Engineering	7
Principles of Electrical Engineering, a 3 . . . . .	Electrical Engineering	8
Electrical Design, b 3 . . . . .	Electrical Engineering	9
Thesis, a & b 2 . . . . .	Electrical Engineering	12
Irrigation, a 2 (1916) or . . . . .	Civil Engineering	11
Highway Construction, a 2 (1915) . . . . .	Civil Engineering	4
Elective, 2 . . . . .		

#### Second Semester—

Design of Power Stations, a 2 b 3 . . . . .	Electrical Engineering	10
Long Distance Transmission, a 2 . . . . .	Electrical Engineering	11
Thesis, a or b 3 . . . . .	Electrical Engineering	13
Railroad Engineering, a 3 . . . . .	Civil Engineering	10
Elective, 5 . . . . .		

Note—Electives must be taken in the department.

Special electives in Electrical Engineering subjects will be offered in the senior and fifth years.

## Civil Engineering

### FRESHMAN YEAR

#### First Semester—

Rhetoric, a 3 . . . . .	English	9
College Algebra, a 5 . . . . .	Mathematics	8
Elementary Chemistry, a & b 5 . . . . .	Chemistry	1
Mechanical Drawing, b 5 . . . . .	Mechanical Engineering	5
Military Tactics, 3 . . . . .		

**Second Semester—**

Rhetoric, a 3 .....	English	10
Plane and Spherical Trigonometry, a 5 .....	Mathematics	9
Elementary Chemistry, a & b 5 .....	Chemistry	2
Machine Shop, b 3 .....	Mechanical Engineering	3
Plane Surveying, a & b 2 .....	Civil Engineering	1
Military Tactics, 3 .....		

**SOPHOMORE YEAR****First Semester—**

Analytic Geometry, a 5 .....	Mathematics	11
General Physics, a 3 b 2 .....	Physics	3
English Literature, a 3 .....	English	17
Plane and Topographical Surveying, a & b 5 .....		
.....	Civil Engineering	2
Military Tactics, 3 .....		

**Second Semester—**

Descriptive Geometry, a & b 1 .....	Mechanical Engineering	7
Calculus, a 5 .....	Mathematics	12
General Physics, a 3 b 2 .....	Physics	4
English Literature, a 3 .....	English	18
Elements Military Science, a 1 .....	Military	1
Machine Design, b 4 .....	Mechanical Engineering	8
Military Tactics, 3 .....		

**JUNIOR YEAR****First Semester—**

Analytic Mechanics and Calculus, a 5 .....	Mathematics	13
Electricity & Magnetism, a 3 b 2 ....	Electrical Engineering	1
Elements of Mechanism, a 3 .....	Mechanical Engineering	10
Hydraulics, a 3 .....	Civil Engineering	5
Graphic Statics, b 2 .....	Civil Engineering	3
Highway Construction, a 2 (1915) or ....	Civil Engineering	4
Irrigation, a 2 (1916) .....	Civil Engineering	11

**Second Semester—**

Analytic Mechanics, a 3 .....	Mathematics	14
Steam Engines and Thermodynamics, a 5 .....		
.....	Mechanical Engineering	12
Mechanics of Materials, a 5 .....	Mechanical Engineering	16
Stresses, a 4 .....	Civil Engineering	6
Railroad Surveying, a 1 b 2 (1916) or ...	Civil Engineering	7
Sanitary Engineering, a 3 (1915) .....	Civil Engineering	15

**SENIOR YEAR****First Semester—**

Economics, a 3 .....	History	15
Geology, a 5 or .....	Agronomy	10
Bacteriology, a & b 5 .....	Zoology	10
Structural Details, a 2 .....	Civil Engineering	8
Structural Steel Design, b 3 .....	Civil Engineering	9
Masonry and Foundations, a 2 ....	Mechanical Engineering	27
Experimental Engineering, b 1 ....	Mechanical Engineering	18
Geodetic Surveying, a & b 2 .....	Civil Engineering	10
Irrigation, a 2 (1916 or .....	Civil Engineering	11
Highway Construction, a 2 (1915).....	Civil Engineering	4

**Second Semester—**

General Astronomy, a 3 .....	Mathematics	15
Contracts and Specifications, a 2 .....	Civil Engineering	13
Bridges and Dams, a 2 b 2 .....	Civil Engineering	12
Reinforced Concrete, a 3 .....	Civil Engineering	14
Sanitary Engineering, a 3 (1915) or ....	Civil Engineering	15
Railroad Surveying, a 1 b 2 (1916) .....	Civil Engineering	7
Experimental Engineering, b 2 ....	Mechanical Engineering	20

**Fifth Year Subjects in Civil Engineering****First Semester—**

Steel Buildings, a & b 3 .....	Civil Engineering	16
Hydraulic Motor, a 3 .....	Civil Engineering	18
Dam and Reservoir Design, b 3 .....	Civil Engineering	17
Thesis, a 2 .....	Civil Engineering	20
Elective, 5 .....		

**Second Semester—**

Dynamo Electric Machinery, a 3 b 2..	Electrical Engineering	3
Kinematics, b 2 .....	Mechanical Engineering	14
Railroad Engineering, a 3 .....	Civil Engineering	19
Thesis, a & b 3 .....	Civil Engineering	21
Elective, 5 .....		

Note—Electives must be chosen in the department.

**General Science****FRESHMAN YEAR****First Semester—**

Rhetoric, a 3 .....	English	9
Elementary Chemistry, a & b 5 .....	Chemistry	1
Military Tactics, 3 .....		

Elective, 11 .....	
French, a 4 or .....	French 1
German, a 4 .....	German 1
Principles of Cookery, a 2 b 3.....	Home Economics 3
Drawing, b 3 .....	Art 14
Business Law, a 2 b 2 .....	Commerce 9
College Algebra, a 5 .....	Mathematics 8
Shopwork, b 3 .....	

### Second Semester—

Rhetoric, a 3 .....	English 10
Elementary Chemistry, a & b 5 .....	Chemistry 2
Military Tactics, 3 .....	
Elective, 11 .....	
French, a 4 or .....	French 2
German, a 4 .....	German 2
Drawing, b 3 .....	Art 15
Textiles and Principles of Sewing, a 2 b 2 .....	
.....	Home Economics 11
Shopwork, b 3 .....	
Plane and Spherical Trigonometry, a 5....	Mathematics 9
Surveying, a & b 2 .....	Civil Engineering 1

## SOPHOMORE YEAR

### First Semester—

English Literature, a 3 .....	English 11
Modern History, a 3 .....	History 7
Military Tactics, 3 .....	
Elective, a & b 14 .....	
French, a 4 or .....	French 3
German, a 4 .....	German 3
And two of the following:	
General Botany, a 2 b 3 .....	Botany 2
General Zoology, a 2 b 3 .....	Zoology 3
Quantitative Chemistry, a & b 5 .....	Chemistry 3
General Physics, a 3 b 2 .....	Physics 3
Analytic Geometry, a 5 .....	Mathematics 11

### Second Semester—

English Literature, a 3 .....	English 12
Modern History, a 3 .....	History 8
Elements of Military Science, a 1 .....	Military 1
Military Tactics, 3 .....	
Elective, a & b 14 .....	
French, a 4 or .....	French 4



German, a 4 .....	German	4
And two of the following:		
General Botany, a 2 b 3 .....	Botany	3
General Zoology, a 2 b 3 .....	Zoology	4
Volumetric Analysis and Drug Assaying, a & b 5.....		
.....	Pharmacy	9
General Physics, a 3 b 2 .....	Physics	4
Calculus, a 5 .....	Mathematics	12

### JUNIOR YEAR

#### First Semester—

English Literature, a 3 .....	English	13
American Government, a 3 .....	History	13
Psychology, a 3 .....	Education	1
Elective, a & b 9 .....		

#### Second Semester—

English Literature, a 3 .....	English	14
Political Parties, a 3 .....	History	14
Ethics, a 3 .....	Education	2
Elective, a & b 9 .....		

### SENIOR YEAR

#### First Semester—

Economics, a 3 .....	History	15
Geology, a 5 .....	Agronomy	9
Elective, a & b 10 .....		

#### Second Semester—

Sociology, a 3 .....	History	16
General Astronomy, a 3 .....	Mathematics	15
Elective, a & b 12 .....		

### Electives in Junior and Senior Years in General Science

#### First Semester—

General Botany, a 2 b 3 .....	Botany	2
Economic Botany, a 1 b 2 .....	Botany	12
Plant Physiology, a 2 b 3 .....	Botany	4
Cytology and Botanical Methods, a & b 5 .....	Botany	8
Quantitative Chemistry, a & b 5 .....	Chemistry	3
Agricultural and Sanitary Analysis, a & b 5.....	Chemistry	5
Industrial Chemistry, a 3 .....	Chemistry	7
General Physics, a 3 b 2 .....	Physics	3
Advanced Physics, a 4 b 1 .....	Physics	5

Heat, a 3 b 1 .....	Physics	7
Entomolgy, a 1 b 1 .....	Entomology	3
Economic Entomology, a 1 b 1 .....	Entomology	5
Systematic Entomology, b 2 .....	Entomology	7
Insects and Disease, a 2 .....	Entomology	12
Nature Study, a 3 .....	Entomology	12
Animal Behavior, a 2 .....	Entomology	13
General Zoology, a 2 b 3 .....	Zoology	3
Comparative Anatomy of Vertebrates, a & b 3 .....	Zoology	7
Histology, a & b 5 .....	Zoology	9
Literary Interpretation, a 3 .....	Public Speaking	1
Extempore Speaking, a 2 .....	Public Speaking	3
Extempore Speaking, a 1 .....	Public Speaking	5
Argumentation and Debate, a 2 .....	Public Speaking	7
Public Address, a 2 .....	Public Speaking	9
Elementary Public Speaking, a 4 .....	Public Speaking	11
Embryology, a & b 5 .....	Zoology	11
Bacteriology, a & b 5 .....	Veterinary	6
Analytic Geometry, a 5 .....	Mathematics	11
Analytic Mechanics, a 5 .....	Mathematics	13
French, a 3 .....	French	5
German, a 3 .....	German	5
English Literature, a 3 .....	English	15
The English Novel, a 3 .....	English	19
Biblical Literature, a 2 .....	English	21
American History, a 3 .....	History	9
History of the West, a 2 .....	History	19
History of Education, a 3 .....	Education	3
School Organization and Administration, a 3 .....	Education	4
Principles of Teaching, a 3 .....	Education	5
The Rural Community, a 2 .....	History	17
Organic Chemistry, a 3 b 2 .....	Chemistry	9
Theory and Practice of Design, a & b 2 .....	Art	4
Art History, a 2 .....	Art	6
Theory of Interpretation and Musical Forms, a 2 .....	Music	6
History of Music, a 3 .....	Music	7
Military Law, a 1 .....	Military	2
Field Service Regulations & Military Field Engineering, a 1 .....	Military	4

#### Second Semester—

General Botany, a 2 b 3 .....	Botany	3
Taxonomy, a & b 5 .....	Botany	7
Cytology and Botanical Methods, a 1 b 4 .....	Botany	9

Volumetric Analysis and Drug Assaying, a & b 5	Pharmacy	9
Chemistry of Foods and Nutrition, a & b 5	Chemistry	4
Agricultural Chemistry, a 3	Chemistry	6
General Physics, a 3 b 2	Physics	4
Advanced Physics, a 4 b 1	Physics	6
Light, a 3 b 1	Physics	8
Entomology, a 1 b 2	Entomology	4
Economic Entomology, a 1 b 1	Entomology	6
Systematic Entomology, b 2	Entomology	8
Bird Study, a & b 2	Entomology	11
General Zoology, a 2 b 3	Zoology	3
Comparative Anatomy of Vertebrates, a & b 5	Zoology	8
Advanced Mycology, a & b 5	Botany	6
Animal Behavior, a 2	Entomology	13
Organic Chemistry, a 3 b 2	Chemistry	10
Histology, a & b 5	Zoology	10
Embryology, a & b 5	Zoology	12
Heredity, a 2 b 1	Botany	10
Calculus, a 5	Mathematics	12
Analytic Mechanics, a 3	Mathematics	14
Literary Interpretation, a 3	Public Speaking	2
Extempore Speaking, a 2	Public Speaking	4
Extempore Speaking, a 1	Public Speaking	6
The Speech for Special Occasions, a 2	Public Speaking	8
Public Address, a 2	Public Speaking	10
Elementary Public Speaking, a 4	Public Speaking	12
French, a 3	French	6
German, a 3	German	6
American History, a 3	History	10
History of the West, a 2	History	20
Principles of Education, a 3	Education	7
Psychology of Child Development, a 3	Education	6
Observation and Practice, a 3	Education	8
Theory and Practice of Design, a & b 2	Art	5
Art History, a 2	Art	7
English Literature, a 3	English	16
English Novel, a 3	English	20
Biblical Literature, a 2	English	22
Theory of Interpretation and Musical Forms, a 2	Music	9
History of Music, a 3	Music	10
International Law, a 1	Military	3
Applied Tactics, a 1	Military	5
Meteorology, a 2 b 1	Agronomy	10
Agricultural Economics, a 3	History	18

## Two Year Course in Pharmacy

### FIRST YEAR

#### First Semester—

Elementary Chemistry, a & b 5 .....	Chemistry	1
General Botany, a 2 b 3 .....	Botany	2
Anatomical Methods, a 3 b 2 .....	Zoology	5
Pharmacy Latin, a 5 .....	Pharmacy	1
Military Tactics, 3 .....		

#### Second Semester—

Elementary Chemistry, a & b 5 .....	Chemistry	2
General Botany, a 2 b 3 .....	Botany	3
Anatomical Methods and Physiology, a 3 b 2 .....	Zoology	6
Pharmacognosy, a & b 5 .....	Botany	1
Military Tactics, 3 .....		

### SECOND YEAR

#### First Semester—

Materia Medica, a 5 .....	Pharmacy	2
Pharmacy, a 5 .....	Pharmacy	4
Volumetric Analysis and Drug Assaying, b 5 .....	Pharmacy	9
Pharmacy Laboratory, b 3 .....	Pharmacy	5
Pharmaceutical Arithmetic, a 2 .....	Pharmacy	6
Military Tactics, 3 .....		

#### Second Semester—

Materia Medica, a 5 .....	Pharmacy	3
Pharmacy, a 5 .....	Pharmacy	7
Organic Chemistry, a 3 b 2 .....	Chemistry	11
Pharmacy Laboratory, b 5 .....	Pharmacy	8
Military Tactics, 3 .....		

NOTE—Students who have received the degree of Pharmacy Graduate may receive the degree of Bachelor of Science upon completing sufficient work in addition to the two-year course to make one hundred and fifty hours of credit.

Of the additional work the following courses are required:

Rhetoric .....	6 hours
English Literature .....	6 hours
History .....	6 hours
Modern Language .....	16 hours
and thirty-six hours elected in physics, chemistry, botany, bacteriology, zoology, or histology. Students electing physics should take trigonometry.	

# Departments and Work

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## The Agricultural Experiment Station

**JAMES W. WILSON, Director.**

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state now receives annually \$30,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely; agronomy, animal husbandry, dairy, horticulture and chemistry.

Each of these divisions is in charge of an expert who is also professor of the same subject in the College.

About sixty acres of the college farm are set aside for experiments in crop rotation and testing varieties of grains.

Another tract of sixty acres is utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the state with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to residents of the state. Inquiries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 19,000 names.

All communications to this department should be addressed to the Director.



## Department of Animal Husbandry

**PROFESSOR WILSON; ASSOCIATE PROFESSOR THOMPSON; MR. CRAMER.**

It is generally admitted that live-stock farming is the basis for an intensive agriculture and that it, as well as good farming, must be practiced if the fertility of the soil is to be maintained.

Work in this department gives the student a practical and scientific knowledge of animal husbandry as applied to South Dakota conditions. The College herds and flocks include representatives of eighteen of the leading breeds of domestic animals. These are all used for class and demonstration purposes. Men having completed this course are well equipped to manage live-stock farms and to judge stock shows and to teach.

The following subjects are offered by this department:

1. **Stock Judging.**—Two recitation and two laboratory periods a week, first semester; required in the freshman year of the Agricultural Course. Study and practice in judging of horses, cattle sheep and swine. Special attention is given to the use of score cards both for market and breeding animals.

Text: Craig's Judging Live Stock.

2. **Breeds of Live Stock.**—Three recitations a week, second semester; required in the freshman year of the Agricultural Course. A study of the various breeds, their origin, development, characteristics and adaptability as to use and locality; work accomplished by the noted breeders of the past and present day reviewed.

Text: Plum's Types and Breeds of Farm Animals.

3. **Advanced Stock Judging.**—Two periods a week, first semester; required in the senior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Husbandry 1 and 2.

Particular attention is given to the placing of animals and the giving of reasons why they are so placed. This course includes the judging of market, breeding and show animals.

4. **Principles of Animal Breeding.**—Three recitations a week, second semester; required in the junior or senior year of the animal husbandry and the dairy husbandry groups, Agricultural Course; prerequisite, Animal Husbandry 2. This course deals with the laws

that govern reproduction and the development of animals, and the different systems employed in producing both market and breeding animals; study of blood lines and pedigrees.

Text: Davenport's Principles of Breeding.

5. **Animal Nutrition.**—Three recitations a week, second semester; required in the junior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Husbandry 1 and 2, and Chemistry 2. This subject deals with the physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations.

6. **Stock Feeding.**—Three recitations a week, first semester; required in the senior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Husbandry 5. A study of the feeding of the various classes of live stock, compounding of balanced rations, results of experimental and practical feeding investigations.

Text: Henry's Feeds and Feeding.

7. **Live Stock Management.**—Two lectures a week, second semester; required in the senior year of the animal husbandry group of the Agricultural Course; prerequisites, Animal Husbandry, 1, 2 and 6. This course will consist of lectures pertaining to the proper locations for live stock farms, the kind and arrangement of buildings, founding and management of herds and flocks, capital required, methods of selling, etc.

8. **Horse Production.**—One recitation a week, first semester; elective in junior and senior years of the Agricultural Course; prerequisites, Animal Husbandry 1 and 3. A study of the market classes of horses, their production and use; care and management of breeding horses and colts; fitting horses for sale and show; practical methods of handling and training horses. Lectures, practical demonstration and assigned reading.

9. **Beef Production.**—One recitation a week, first semester; elective in junior and senior years of the Agricultural Course; prerequisites, Animal Husbandry 1 and 3. Practical method of beef production; feeding for market, fitting for show and general care and management of same. Lectures, practical demonstrations and assigned readings.

10. **Swine Production.**—One recitation a week, first semester; elective in junior and senior years of Agricultural Course; prerequisites Animal Husbandry 1 and 3. A course dealing with the care and management of breeding hogs; fattening and finishing market hogs; pasture crops and grain crops as adapted to hog rais-

ing; immunizing hogs against cholera and a practical discussion of the merits of more common breeds.

11. **Sheep Production.**—One recitation a week, first semester; elective in junior and senior years of Agricultural Course; prerequisites, Animal Husbandry 1 and 3. Best systems of sheep farming; general care and management of the breeding flock; production of spring lambs; practical demonstrations in docking, shearing and castrating. Lectures and assigned reading.

12. **Poultry Culture.**—Two lectures a week, first semester. A general course dealing with housing, yarding, marketing and the care of breeding and growing poultry.

13. **Poultry Feeding.**—One lecture a week, first semester. This course should be preceded or accompanied by Poultry Culture. A course dealing with the feeding of breeding flocks; laying flocks; fattening for market and home use, and a general discussion of feeds as adapted to poultry.

14. **Poultry Breeding.**—Two lectures a week, second semester. This course should be preceded or accompanied by Poultry Culture. A study of the mating systems used in producing show and utility birds; the mechanism, operation and management of incubators and brooders.

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### Department of Dairy Husbandry

**PROFESSOR LARSEN; ASSOCIATE PROFESSOR FULLER; MR. HUNGERFORD; MR. GREGORY; MR. CLIFFORD.**

This department offers three separate courses: (1) The Four-Year Agricultural Course, the last one and a half years of which are devoted chiefly to special dairy studies. (2) The Three-Months Dairy Course. (3) The one-week course for cream testers.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men

to become successful operators of creameries, cheese factories, central plants and dairy farms.

The one-week course is given in December in order that examinations for licenses may be taken before January first.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery and cheese factory throughout the year. The department occupies a two-story brick building. On the first floor are the engine room, creamery rooms with full equipment for butter, cheese and ice cream making, refrigerating rooms, locker and reading room, and a large laboratory used for instructional purposes. On the second floor are located class rooms, offices, dairy bacteriology laboratory, and chemistry research laboratory.

The dairy herd, which consists of representatives of the principal dairy breeds, affords an excellent opportunity to become acquainted with dairy type. The dairy barn is large and well equipped. Milking machines are in daily use, thus affording students opportunity to acquire practical knowledge regarding machine milking.

Experiments relating to feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments, note manner of outlining and executing investigational work, and profit from results. Advanced worthy students may arrange to assist in some of this work.

The following work is offered:

1. **Farm Dairying.**—Two lectures and one laboratory period a week, second semester; required in the freshman year of the four-year Agricultural Course, and with some modification during the first year of the School of Agriculture.

This subject comprises a study of the economic production, secretion and composition of milk; of the comparative economy in dis-

posing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germ and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

**2. Inspection and Testing of Dairy Products.**—Four lectures and laboratory periods a week, first semester; required in the junior year of the dairy group, Agricultural Course.

Those taking this course should have had at least one term's work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

**3. Dairy Bacteriology.**—Two lectures and three laboratory periods a week, second semester; required in the senior year of the dairy group, Agricultural Course.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk, and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, and bacteria as related to the manufacture of cheese. General bacteriology is a prerequisite study.

**4. Factory Operation (Creamery).**—Three lectures and two laboratory periods a week, first semester; required in the junior year of the Dairy Husbandry group, Agricultural Course; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

**5. Factory Operation (Cheese).**—Three lectures and two laboratory periods a week, second semester; required in the senior year of the dairy group, Agricultural Course.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheese, including the principles involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.



6. **Dairy Management.**—Two lectures and one laboratory period a week, first semester; required in the senior year of the dairy group, Agricultural Course.

The various methods of improving and upbuilding a dairy herd and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody study of the extent to which dairy farming is practiced and under which conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

7. **Dairy Technology.**—Two lectures and two laboratory periods a week, second semester; required in the junior year of the dairy group of the Agricultural Course; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

8. **Dairy Research.**—Second semester, senior year; elective in the junior or senior year. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

9. **Dairy Practice, Elective.**—The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

10. **Domestic Dairying.**—One lecture and one laboratory period a week; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adul-

teration of milk and dairy products, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making of cheese and butter on the farm will be demonstrated in the college creamery laboratory.

**11. Advanced Inspection of Dairy Products.**—Three lectures and two laboratory periods a week, first semester, senior year; prerequisites, Dairy 2, Chemistry 3.

This course takes up a study of the properties of the component parts of milk and its products including abnormal milks, synthetic milk, condensed and powdered milks, butter from neutralized cream, oleomargarine and leading types of cheese.

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## Department of Veterinary Medicine

**DR. LIPP.**

Part of the work given in this department is planned to correlate with other work given in the Department of Animal Husbandry. Other work is of such character as will be of very material aid to the educated farmer in helping him to realize the seriousness of the infectious and contagious diseases and to co-operate with local and state authorities for their control and eradication.

Some of the commoner ailments of farm animals are considered especially with regard to their prevention. None of the work is planned to prepare the student to treat diseases of farm animals. Barnyard hygiene is given considerable attention along with disease prevention.

**1. Veterinary Anatomy.**—Two recitations per week, second semester; required in the freshman year of the Agricultural Course. The lectures consist of a brief study of the anatomy of the front limb of the horse, and are planned to give the student an introduction into anatomical study, to prepare him for better work in stock judging, and also for the courses in anatomy of conformation and soundness, and animal mechanics respectively. A somewhat detailed study of the structure of the foot, and various forms of lameness are included since they will be of value in all matters relating to horseshoeing and lameness in farm horses.

**2. Veterinary Medicine.**—Three lectures per week, first semester; required in the senior year of the Animal Husbandry group, Agricultural Course. This course deals with the cause, spread,

symptoms, diagnosis and prevention of the common infectious and contagious diseases of farm animals.

No attempt is made to develop proficiency in diagnosis, but rather to aid the student to understand the contagiousness of the diseases studied, and teach him to give intelligent co-operation to local and state authorities.

**3. Anatomy of Conformation and Soundness.**—Two lectures per week, first semester; required in the junior year. It is planned to follow Veterinary Anatomy and correlate with it, also to be of further help to the student judging live stock. The anatomical differences in conformation and type are considered in detail, special attention being given to bones and joints.

**4. Animal Mechanics.**—Two lectures per week; required in the junior year, first semester. This course takes up a consideration of the animal body as a machine. The action of the bones as levers is given proper attention, also the use of muscles as power applied to the bony levers is considered fully. The aim of this course is to acquaint the student with those principles in physics which are in daily operation in farm animals on the roads and fields of the state.

**5. Stable Hygiene and Disease Prevention.**—Three lectures per week; required in the senior year, first semester. The course studies the needs of animals for ventilation, the best systems of ventilation, and lack of ventilation as a cause of disease.

Consideration of food and water as causes of disease is also included. Care and sanitation also come in for their full consideration. This course should be of the highest value to every educated stockman.

**6. Physiology of Digestion.**—This course occupies the last half of the second semester, following a course in general and human physiology. The course deals with the processes of digestion and assimilation in horses and cattle. Food is traced from the mouth through the various digestive processes to the tissues of the body. The use of the food within the tissues is then studied and the production of tissue waste. Finally the excretions and their composition are studied.

This course is planned to be of very material aid to the intelligent feeding of live stock. (See Zoology 4).

## Agronomy Department

**PROFESSOR HUME; ASSOCIATE PROFESSOR HUTTON; MR. CHAMPLIN; MR. LOOMIS; MR. SLOAN.**

The Agronomy Department is the department of soils and crops. To help students apply the principles of science to crop production on the farms of South Dakota is the essential purpose of the courses offered.

What is soil in South Dakota, or on some farm within the state? The student may learn to outline soil areas, to analyze soils, to observe field experiments, and answer the question for himself.

What crops will grow on South Dakota soil areas, and how may the growing of them be made most profitable to the man who does the work? A study of the results of experiments will answer the questions for the student. It is attempted to give the student in agronomy that accurate knowledge of conditions which is necessary to success in farming.

The courses offered are fundamental, practical, scientific. They are designed for South Dakota farmers. They may be taken with profit by prospective teachers of agriculture, or experiment station workers.

1. **Farm Crops.**—Two recitations and three laboratory periods per week, first semester; required in the freshman year of the Agricultural Course. Grain judging and seed testing. Score card judging of wheat, barley, oats, emmer, potatoes, corn and other crops. Weeds and weed seeds. Classification, harvesting, grading, cleaning, storage and care of crops. Open to all college students, without prerequisite.

2. **Farm Crops.**—Three recitation hours and two laboratory periods per week, second semester; required in the junior year of the agronomy group, Agricultural Course; prerequisite, Agronomy 1, or Botany 1, and one year of college work. Special crops adapted to South Dakota conditions; methods, cost and profit in production; practical and scientific arrangement of crop rotations with a view to better crops; the relation of the crops produced in South Dakota to the world supply. As much attention as possible is given to the improvement of crops by selection and breeding.



3. **Advanced Farm Crops.**—Elective in the junior or senior year; five to ten credits; prerequisite, Agronomy<sup>2</sup> and two years of college work. Special problems for advanced students. The advanced student may become interested in some particular line of investigation, as for instance, a problem in corn breeding, the effect of storing of seed of corn or other crops upon germination and growth, the effect of various methods of cultivation, and problems of crop improvement. Such work may imply a study of previous experiments, cropping experiments in green house or on the field. The student will submit a final report or thesis. Time and number of hours to be arranged with instructor in charge.

4. **Soil Physics and Management.**—Five lecture and laboratory periods a week, first semester; required in the junior year of the Agricultural Course; prerequisites, Physics 1 and 2, Chemistry 1 and 2. This course deals with the origin and development of the soil under different climatic conditions; classification of soils upon several bases; texture, porosity, specific gravity, plasticity, capillarity, granulation of soils; the soil as a reservoir for water; the movement and control of soil water; irrigation and drainage; the alkali problem; aeration of the soil, its relation to soil texture and plant growth; soil temperature; the physical effect of manures upon the soil; soil erosion by wind and running water—blowing and washing—and their control; the practical application of the foregoing to methods of tillage; crop rotations and the application of green and farm manures in the management of different types of soil. The laboratory work includes a careful study of the physical properties of the soil through observation and practice; soils are also studied under field and green house conditions.

5. **Soil Fertility.**—Five lecture and laboratory periods a week, second semester; required in the junior year of the Agricultural Course; prerequisite, Agronomy 1 and 4, and Chemistry 3. The relation of the fertility content of the soil to crop yields; effect of supplying various elements of fertility; effects of different rotations and systems of farming in relation to permanent agriculture; a study of a system of agriculture in relation to permanent agriculture; a study of a system of agriculture adapted to South Dakota conditions. The laboratory work includes the analysis of manures and fertilizers and the determination of their agricultural and commercial values; the analysis of various farm products; the analysis of a soil, preferably from the student's home farm, to determine the fertility content. These analyses serve as the basis for devising a system of permanent agriculture for the student's home farm.



6. **Advanced Soil Physics.**—Five lecture and laboratory periods a week, first semester; elective in the senior year; prerequisite, Agronomy 4. This course is designed for those students who wish to continue the work in Soil Physics begun in Agronomy 4. A study in the field of the effects of discing, harrowing, rolling, subsoiling, frequency and depth of cultivation with reference to conservation of soil moisture. The student may select a soil in which he is interested and make a complete physical analysis thereof; he may make a careful study of the movement of the water therein and its effect upon the growth of plants; he may choose a special irrigation or drainage problem in which he is interested; the results of the work are summarized in a final report or thesis. Students who elect this course are advised to signify their intention of so doing at the end of the college year, so that materials may be collected during the summer, and observations reported.

7. **Advanced Soil Fertility.**—Five lecture and laboratory periods a week, second semester; elective in the senior year; prerequisites, Agronomy 4 and 5. This course is a continuation of Agronomy 5 and permits the student to study in detail a special soil in which he may be interested or to pursue a special problem. The work may include pot culture work in the green house; analysis of the soil used in the pots; application of various fertility elements and their relation to the management of the soil; the study of the micro-organisms of the soil in relation to the preparation and availability of plant food, preparation of culture media, cultures from soil suspensions, preparation and study of a few pure cultures, ammonification, nitrification, nitrogen fixation, legume bacteria and conditions favorable to their growth, inoculation; results of bacterial action determined by quantitative analysis; reading of bulletins, books, etc., and the preparation of a bibliography. The results of the study will be submitted in a final report or thesis.

8. **Soils.**—Two hours per week, second semester; elective in the senior year. A consideration of the effects of the change in water contents of soils through irrigation and drainage; the effect upon the physical condition of the soil and upon its productivity, special attention given to the problems of irrigation and drainage of unreclaimed lands in South Dakota. Lectures, reading, field observations.

9. **A Series of Lectures on Various Subjects Pertaining to Soils and Crops.**—Given by request of the Department of Dairy Husbandry for the students of the three months Creamery Course.

10. **Earth Science; Geology.**—Three recitations and two laboratory periods a week, first semester; required in the senior year of the General Science and Civil Engineering Courses and in the Agronomy group of the Agricultural Course. A course in general geology with the greater emphasis placed upon the physical division of the subject. The geology of South Dakota in relation to soils, water supplies and mineral wealth is given special attention. Collections of rocks, minerals, typical fossils, physiographic and geologic models, lantern slides, charts and maps are available for laboratory work and reference.

11. **Earth Science; Meteorology.**—Two recitations and one laboratory period a week, second semester; elective in the junior year or senior year. A practical course dealing with the laws controlling the movements of the atmosphere, the study of climatological and weather factors, with special attention to conditions in the United States, the climate and weather of South Dakota in relation to her various economic interests, weather maps and forecasts.

**Graduate Courses.**—A limited number of courses of study may be arranged for students who have already received the Bachelor's Degree and who desire to pursue some line of investigational work. Such students should consult with the professor in charge. Problems relating to systems of farming and soil fertility, mechanical composition of soils, drainage water, variation in type as related to crop yields, influence of selection and breeding upon yield of special crops may be included in a list of possible studies for graduates.

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## Department of Horticulture and Forestry

**PROFESSOR HANSEN; MR. STOLTENBERG.**

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainment in the various science under-

lying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are offered by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for the general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

Special stress is placed upon practical work in the grafting room.

The following work is offered:

**1-2. General Horticulture.**—One laboratory period a week throughout the year; required in the sophomore year of the Agricultural Course. An introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

**3. Floriculture and Market Gardening.**—One recitation and laboratory period a week, second semester; required in the junior year of the horticulture group, Agricultural Course.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations, and text book work.

4. **Forestry.**—Two lectures or recitations a week, first semester; required in the senior year of the horticulture group, Agricultural Course.

Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees; lectures and demonstrations.

Texts: Pinchot's *Primer of Forestry*; Green's *Forestry in Minnesota*; *Proceedings of the American Forestry Congress*.

5. **Systematic Pomology.**—One laboratory exercise a week, first semester; required in the junior year of the horticulture group, Agricultural Course.

Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits. Texts: *American Horticultural Manual*, Bailey's *Principles of Fruit Culture*.

6. **Landscape Gardening.**—Two laboratory periods a week, second semester; required in the senior year of the horticulture group Agricultural Course.

The philosophy of the beautiful in its various modes of expression; gardening as one of the fine arts; historic developments of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds; lectures; text-book, and references.

7. **Heredity.**—Three recitations a week, second semester; required in the junior year of the horticultural group, Agricultural Course.

This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to society; recent theories and work in plant-breeding.

Texts: Darwin's *Animals and Plants under Domestication*; De Vries' *Species and Varieties, their Origin by Mutation*; Bailey's *Plant-Breeding and Survival of the Unlike*; *Reports of International*

Conferences on Genetics; Reports of the U. S. Department of Agriculture.

8. **Plant Propagation.**—Practical exercises in tree, shrub and plant propagation for students in the short agricultural course.

9. **Floriculture and Home Gardening.**—Instruction in home gardening for the students in the short winter course in domestic economy and agriculture; text-books; practical demonstrations and exercises.

10. **Forestry and Landscape Gardening.**—Lectures and exercises in the leading essentials of tree culture and the planting of home grounds for students in the short winter courses in agriculture.

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### Department of Home Economics

**MISS FROMME; MRS. PRUSIA; MISS HARTGERING; MISS WOOD.**

The purpose of the department is to provide training along the lines of intelligent house-keeping and home-making. The location for carrying on the work is most favorable, being the entire third floor of the North Building, where there is abundance of room, air and light. The rooms consist of a large kitchen, a dining-room, a sewing-room and a recitation room provided with the equipment necessary for carrying on the work. Through the general library, opportunity is given for the use of the newest and best literature relating to the subject.

The work offered is intended to impart knowledge, develop skill in execution, stimulate self-direction and broaden and strengthen the individual. A good foundation of pure science is laid for all applied science while handwork, including sewing, gives opportunity for artistic expression the principles of which are gained through the regular art training.

The general subjects of the department as follows:

For Home Economics 1 and 2, see the preparatory department.

3. **Principles of Cookery.**—Two recitations and three laboratory periods a week, first semester; required in the freshman year of the Home Economics Course; elective in the freshman year of General Science Course; freshman or higher classification necessary.



The work covers the study of food in source, composition, nutritive value, preparation and serving with training in care of kitchen and utensils.

4. **Serving and Dietetics.**—One recitation and two laboratory periods a week, second semester; required in the junior year of the four year Home Economics Course; elective in the junior year of General Science Course in place of Physics 4; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 1. The work includes preparation of menus with special reference to balanced diet, cost, cooking and serving of meals and calculation of dietaries.

5. **Special Problems in Cookery.**—One recitation and two laboratory periods a week, second semester; required in the senior year of the four year Home Economics Course; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 2.

The course covers diet for children and invalids and other advanced work in dietetics.

6. **Sanitation and Hygiene.**—Three recitation periods a week, first semester; required in the senior year of the Home Economics Course; elective, together with Home Economics 6, in the junior year of the General Science Course in place of Physics 3; prerequisite, Chemistry 2, Botany 2 and Zoology 2. The course includes consideration of municipal and rural problems in sanitation, the care and handling of food in the market and in the home, the lighting, heating, ventilation, plumbing and general care of the house.

7. **Home Nursing.**—Three recitation periods a week, first semester; required in the junior year of the four year Home Economics Course. Senior classification or special advanced standing necessary. The work covers the general care of the sick, directions for emergencies and consideration of some common diseases.

8. **The House and Market.**—Three recitations a week; required in the first semester of the senior year of the four year Home Economics Course; elective, together with Home Economics 4, in place of Physics 3, in junior year of the General Science Course. The work embraces construction, furnishing and general care, including the cost of necessary articles, purchase and care of food, the preparation of marketing lists and a study of accounts.

10. **Textiles and Principles of Sewing.**—Two lecture and two laboratory periods a week, second semester; required in the freshman year of the Home Economics Course; elective in the freshman year of the General Science Course. The course covers the making of simple and useful articles in which are incorporated the stitches

necessary for garment making; the making of a set of undergarments is also required. A study is made of the fabrics used in such work along the lines of source, manufacture, general characteristics and qualities and adaptations to specific uses.

11. **Dressmaking.**—One recitation and two laboratory periods a week, first semester; required in the sophomore year of the Home Economics Course; prerequisite, Home Economics 9. The work includes drafting, cutting, fitting and making of a shirt-waist suit. Supplementary work, to meet individual needs, may be required.

12. **Advanced Dressmaking.**—Two recitations and one laboratory period a week, second semester; required in the junior year of the Home Economics Course; prerequisite, Home Economics 10 and 11. The course covers the making of a fitted and lined costume and such other work as seems best for the individual.

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### Department of Mechanical Engineering

**PROFESSOR SOLBERG; PROFESSOR COOK; MR. BONELL;  
MR. STEFFINS.**

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity

of tools. They are furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50-horse power steam engine.

The Experimental Engineering Laboratory is equipped with a 100,000 pound vertical screw testing machine, for making tensile and compressive tests of the various materials of construction; an automatic shot cement briquette testing machine; a gas engine; a 10 by 10 steam engine; an 8 by 10 steam engine; a 5 by 7 steam engine; and there are also available for this work a 12 by 14 steam engine and two 48 by 16 horizontal tubular boilers. A calorimeter for determining the heat values of gases; a calorimeter for making British thermal unit tests of coal, and an apparatus for flue gas analysis are also used in this work.

The laboratory also possesses a large amount of small apparatus such as indicators, planimeters, steam gauges, thermometers, etc., and a complete outfit for making tests of sand, cement and concrete.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered:

For Mechanical Engineering 1 and 2, see the preparatory department.

3. **Machine Shop.**—Three laboratory periods a week, second semester; required in the freshman year of the three Engineering

Courses. Includes a study of the materials used in machine work; shop sketching; methods of laying out work; exercises in pipe fitting, chipping, filing, scraping, belt lacing, shaft aligning, babbiting, riveting, soldering, hand and ratchet drilling; and the elementary principles of machine work.

4. **Machine Shop.**—Five laboratory periods a week, first semester; required in the sophomore year of the Mechanical and Electrical Engineering Courses. Includes a study of the principles and methods of machine work; problems involving the use of the various machine tools, as the lathe, planer, shaper, milling machine, drill grinder, drill press, etc. Regular text book and class work supplements the actual work in the shop during both semesters of machine shop. Prerequisite, Machine Shop 3.

5. **Mechanical Drawing.**—Five laboratory periods a week, first semester; required in the freshman year of the three engineering courses. Instrumental, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. **Architectural Drawing.**—Three times a week, first or second semester; required in senior year of the horticultural group, Agricultural Course. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. **Architectural Design.**—Three times a week, first semester; elective. Principles of planning introduced in practical problems, exercises in composition and details.

6b. **Perspective.**—Five times a week, first or second semester; elective.

7. **Descriptive Geometry.**—One recitation and laboratory period a week, second semester; required in the sophomore year of the three Engineering Courses; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. **Machine Design.**—Four laboratory periods a week, second semester; required in the sophomore year of the Engineering Courses. Solution of various problems involving the design of simple parts of the machine.

9. **Machine Design.**—Two laboratory periods a week, first semester; required in the junior year of the Mechanical and Electrical Engineering Courses. Continuation of Mechanical Engineering 8.

10. **Elements of Mechanism.**—Three recitations a week, first semester; required in the junior year of the three Engineering Courses. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. **Gas Engines and Gas Producers.**—Two recitations a week, second semester; required in the senior year of the Mechanical and Electrical Engineering Courses and in the fifth year of the Civil Engineering Course; prerequisite, Thermodynamics. Study of the theory, design and operation of gas, gasoline and oil engines and of the various types of gas producers.

12. **Steam Engines and Thermodynamics.**—Five recitations a week, second semester; required in the junior year of the three Engineering Courses; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. **Steam Boilers.**—Two recitations a week, first semester; required in the senior year of the Mechanical and Electrical Engineering Courses; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gages and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

14. **Kinematics.**—Two laboratory periods a week, second semester; required for the fifth year degree in the Mechanical and the Civil Engineering Courses. Geometry of machinery, problems in the design of motion transmitting appliances.

16. **Mechanics of Materials.**—Five recitations a week, second semester; required in the junior year of the three engineering courses; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of the materials of construction and the behavior of and characteristics displayed by these materials when put under stress. Text: Merriam's Mechanics of Materials.

17. **Experimental Engineering.**—Three laboratory periods a week, first semester; required in the senior year of the Mechanical



and Electrical Engineering Courses; prerequisite, Mechanics of Materials. Includes a series of tests of the various materials of construction, such as wood, cast iron, wrought iron, steel, sand, cement and concrete. Also includes the calibration of steam gauges, thermometers, planimeters, and the testing of oils.

18. **Experimental Engineering.**—One laboratory period a week, first semester; required in the senior year of the Civil Engineering Course; prerequisite, Mechanics of Materials. Includes a series of tests of the various materials of construction.

19. **Experimental Engineering.**—Five laboratory periods a week, second semester; required in the senior year of the Mechanical and Electrical Engineering Courses. Includes a complete series of tests of the heating values of various coals; use of the steam engine indicator, throttling and separating calorimeters, dynamometers and Prony brakes; and complete efficiency tests of engines and boilers in actual operation. It is the endeavor in this work to make each student thoroughly familiar with the construction and operation of steam engines, steam boilers, gas engines, and the many attachments and auxiliaries necessary for their efficient operation.

20. **Experimental Engineering.**—Two laboratory periods a week, second semester; required in the senior year of the Civil Engineering Course. Includes laboratory investigations of various problems in concrete work.

21. **Engineering Design.**—Five laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Solution in the drawing room of some practical problems in design and making working drawings of same.

22. **Engineering Design.**—Five laboratory periods a week, second semester; required in the senior year of the Mechanical Engineering Course. Continuation of Mechanical Engineering 21.

23. **Structural Design.**—Three laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Design of roofs and buildings for power stations. For students in mechanical and electrical engineering.

24. **Structural Engineering.**—Two laboratory periods a week, second semester; required for the fifth year degree in Mechanical Engineering. Continuation of Mechanical Engineering 23, with special reference to results obtained from Mechanical Engineering 19.

25. **Statics.**—Two recitations a week, first semester; required

for the fifth year degree in Mechanical Engineering. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

**26. Heating and Ventilation.**—Two recitations a week, second semester; required for the fifth year degree in Mechanical Engineering. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

**27. Masonry and Foundations.**—Two recitations a week, first semester; required of senior engineering students. A study of cement, concrete and building stone with special reference to their use in walls and foundations; bearing power of soils; design and construction of foundations of various kinds.

**28. Special Problems in Experimental Engineering.**—Two laboratory periods a week, second semester; elective; open to senior engineering students upon approval of head of their department.

**29. Concrete Construction.**—Two laboratory periods a week, first semester; elective; open to junior or senior students in general science and agricultural courses. Will include practical problems in the use of concrete and the testing of concrete materials.

**30-31. Thesis Work.**—Two and three hours a week, first and second semesters; required for the fifth year degree in Mechanical Engineering. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

## Department of Civil Engineering

### PROFESSOR WILLIS.

The course in Civil Engineering is designed to give a broad education in the general and scientific subjects which form the foundation of all branches of technology; and to give as much special training as time will permit in several of the more important subjects which belong to that branch of technology known as Civil Engineering.

During the freshman and sophomore years the greater part of the time is devoted to the fundamental studies which give both general culture and preparation for the technical work of the following years. The study of Physics, Mathematics, Chemistry and English is carried on; and work in Mechanical Drawing, Machine Shop and Machine Design is given. The theory of Plane and Topographical Surveying accompanied by field work and map drawing is begun in the freshman year and continued in the sophomore year.

During the junior and senior years practically all of the time is devoted to purely engineering subjects, a large portion of which is given by the Civil Engineering Department. These subjects, the time allotted to them, and the methods of treatment have been chosen with care and with due regard to the end in view, which is to graduate men who know how to think correctly for themselves and who are thoroughly prepared to enter any of the several branches of engineering and to make good in the truest sense. These subjects might be considered as falling naturally into three groups or divisions of civil engineering, namely: (1) Municipal Engineering, including the subjects of Surveying, Highway Construction, Hydraulics, Sanitary Engineering and Irrigation—subjects which are as important to the farm, however, as to the municipality; (2) Railroad Engineering and Geodetic Surveying; (3) Structural Engineering and Building Construction, including the subjects of Graphic Statics, Stresses, Structural Details, Structural Design, Bridges, Dams and Reinforced Concrete. A working knowledge of the laws relating to en-

gineering contracts and specifications is of great value to all engineers and a short course in this subject is given.

To aid it in carrying on its work, the department is provided with suitable equipment, which includes transits, levels, plane table, solar attachment, sextant, current meter, planimeter, protractor, rods, tapes and various hand instruments.

Men completing the work of the four-year course in this department are graduated with the degree of Bachelor of Science (B. S.). Those completing the additional fifth year course of study are given the advanced degree of Civil Engineer (C. E.).

A detailed description of each subject offered by the department follows:

1. **Plane Surveying.**—Two periods of recitation and field work per week, second semester; required in the three Engineering Courses and elective in the General Science Course, freshman year. The theory and practice of land surveying, including United States land surveys, computation of areas, dividing land and determining heights and distances. Field work with level and transit in determination of heights and distances and in making surveys of farms. Preparation required: Plane Trigonometry and Mechanical Drawing. Text: Tracy's Plane Surveying.

2. **Plane and Topographical Surveying.**—One recitation and four field and drafting room periods per week, first semester; required in sophomore year of the Civil Engineering Course. Preparation required: Civil Engineering 1. Continuation of Plane Surveying together with the theory and use of the plane table, and of the transit and stadia. Pen topography and detailed field work; the construction of topographic contour maps, leveling, triangulation and adjustment of instruments. Text: Tracy's Plane Surveying.

3. **Graphic Statics.**—Two drafting room periods per week, first semester; required in the junior year of the three Engineering Courses. Preparation required: Mathematics 10 and 11, General Physics 3. Shears and bending moments in beams, center of gravity and moment of inertia of cross sections, analysis of stresses in roof and bridge trusses, mill bents and three hinged arches by graphical methods. Text: Merriman and Jacoby's Roofs and Bridges, Part II.

4. **Highway Construction.**—Two recitations per week, first semester; required in junior or senior year of Civil Engineering



Course; also for the senior year of Mechanical Engineering Course for the year in which the subject is given. The location, construction and maintenance of country highways and city streets. Text: Blanchard and Drowne's Highway Construction. Seniors and juniors take this subject at the same time, and it is given in alternate years only. It will be given in 1915.

5. **Hydraulics.**—Three recitations per week, first semester; required in junior year of the three engineering courses. Preparation required: Mathematics 11 and 12, General Physics 3 and 4. Hydrostatics and Theoretical Hydraulics. The study of flow of water through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; and application to engineering, water power plants and development. Text: Merriman's Hydraulics.

6. **Stresses.**—Four recitations per week, second semester; required in junior year of Civil Engineering Course. Preparation required: Mathematics 13 and Graphic Statics. The theory and computation of stresses in roof and bridge trusses under dead, live and wind loads. Locomotive wheel loads on plate girders and bridge trusses. Text: Merriman and Jacoby's Roofs and Bridges, Part I.

7. **Railroad Surveying.**—One recitation and two field and drafting room periods per week, second semester; required in junior or senior year of Civil Engineering Course. Preparation required: Civil Engineering 1 and 2, Mechanical Engineering 7. Reconnaissance, preliminary and location methods, with theory of curves and turnouts. Location of a line, with the preparation of profiles and maps. The computation of earth-work and estimate of cost. Text: Allen's Railroad Curves and Earthwork. Seniors and juniors take this subject at the same time and it is given in alternate years only. It will be given in 1916.

8. **Structural Details.**—Two lecture periods per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3 and 6, Mechanical Engineering 16. Lectures on shop practice in making drawings and shop bills and in designing connections and other details for structural steel, including the design of beams, bearings, grillages, columns, struts and girders. Solution of problems required. Handbooks: Cambria Steel and Bethlehem Steel.

9. **Structural Steel Design.**—Three drafting periods per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3 and 6, Mechanical Engineering 16. The design and the making of general and detailed



drawing of beams, columns, grillages, and roof truss, a plate girder railroad bridge and a riveted or a pin connected truss bridge. Reference Book: Merriman and Jacoby's Roofs and Bridges, Part III, or Thomson's Structural Design and Typical Railroad Bridges.

10. **Geodetic Surveying.**—Two periods of recitation and field work per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 1 and 2, Mathematics 10 and 13. Elements of the method of least squares and the application to the adjustment of triangulation. The figure of the earth. Field work in triangulation and in determination of azimuth. Text: Merriman's Precise Surveying and Geodesy.

11. **Irrigation.**—Two recitations per week, first semester; required in senior or junior year of Civil Engineering Course, also in senior year of Mechanical Engineering Course for year in which the subject is given. Preparation required: Civil Engineering 5. A study of the principles of irrigation engineering; namely, a consideration of fundamental questions underlying the design and construction of works for holding and controlling the waters needed for agriculture; and of those matters necessary to insure the financial success of the enterprise. Text: Newell & Murphy's Irrigation Engineering. Seniors and juniors will take this subject at the same time, and it is given in alternate years only. It will be given in 1916.

12. **Bridges and Dams.**—Two recitations and two drafting room periods per week including lectures, second semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3, 6, 8 and 9. Continuation of Civil Engineering 9 and a study of higher structures, including continuous, draw, cantilever and suspension bridges and metallic arches. The theory and design of masonry walls, dams and arches. Text: Merriman and Jacoby's Roofs and Bridges, Part IV.

13. **Contracts and Specifications.**—Two recitations per week, second semester; required in senior year of the three Engineering Courses. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's Engineering Contracts and Specifications.

14. **Reinforced Concrete.**—Three recitations per week, second semester; required in senior year of Civil Engineering Course. Preparation required: Mechanical Engineering 16, Civil Engineering 8 and 9, Mathematics 13. A study of manufacture and properties of cement and reinforcing steel, and of the theory and design

of plain and reinforced concrete construction. Text: Hool's Reinforced Concrete Construction, Vols. I and II.

15. **Sanitary Engineering.**—Three recitations per week, second semester; required in senior or junior year of Civil Engineering Course. Preparation required: Civil Engineering 5. The study of the principles to be observed in order that a pure water supply, and an efficient system of sewerage may be secured, and a study of the design, construction and operation of municipal water supply and sewage disposal works. Text: Merriman's Elements of Sanitary Engineering. This subject is taken by seniors and juniors at the same time and is given in alternate years only. It will be given in 1915.

16. **Steel Buildings.**—Three recitation and drafting room periods per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 8 and 9. Design and general drawings of steel mill, mine and high office buildings, and arches.

17. **Dam and Reservoir Design.**—Three drafting room periods per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 3, 5 and 15, Mathematics 11 and 13. The study of modern hydraulic construction, dams, reservoirs, levees, etc. Structures relating to water power, canals and irrigation.

18. **Hydraulic Motors.**—Three recitations per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 5. A study of reaction and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

19. **Railroad Engineering.**—Three recitations per week, second semester; required for fifth year degree in Civil Engineering. The construction of the roadbed, including ballast, crossties, rails, switches, culverts, maintenance of way and elements of railroad operation. Economic location, arrangement of yards, station and terminals. Train resistance. Application of electricity.

20-21. **Thesis.**—Two and three hours per week, first and second semester; required for fifth year degree in Civil Engineering. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress

of the investigation or design to the professor having charge of the subject. The subject and plan of the work should be submitted to the professor in charge not later than November first of the current year.

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### Department of Electrical Engineering

**PROFESSOR BRACKETT; ASSISTANT PROFESSOR HOY.**

The purpose of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both direct and alternating current types, transformers and measuring instruments of different types and classes for recording and measuring currents, pressures and speeds. A sixty-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered:

1. **Electricity and Magnetism.**—Three recitations and two laboratory periods a week, first semester; required in the junior year of the Electrical, Mechanical and Civil Engineering Courses; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the theory and principles of static and current

electricity, magnetism and the magnetic circuit, electro-magnetic induction and laws of the electric circuit, primary and secondary batteries.

2. **Electrical Measurements.**—One laboratory period per week, second semester; required in the junior year of the Electrical Engineering Course; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Dynamo Electric Machinery.**—Three recitations and two laboratory periods a week, second semester; required in the junior year of the Mechanical and Electrical Engineering Courses, and for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of generators and motors. Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

4. **Alternating Currents.**—Three recitations and two laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course, also for the fifth year degree in Mechanical Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1 and 3. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurements of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

5. **Dynamo Design.**—Three laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1 and 3. In this course the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

6. **Electric Light and Power Distribution.**—Three recitations and two laboratory periods a week, second semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 4. A study of the



construction of standard transmission lines, both overhead and underground, resistance and inductance effects in these lines, kinds of apparatus used in the generating station and in the receiving station, distributing systems, arc and incandescent lamps, indicating and recording meters, laboratory work in lamp testing, in the calibration of instruments, and in other lines.

7. **Electric Traction.**—Three recitations and two laboratory periods per week during the first semester. Various features of electric car and train operation will be studied. Among these will be types of cars, motors and controlling apparatus, the operating characteristics of various types of equipment, power stations for this kind of service, transmission lines, substations, and distributing systems. A considerable portion of the time assigned for laboratory work in the subject will be given to the inspection of traction systems in actual operation upon which accurate and detailed reports will be required.

8. **General Principles of Electrical Engineering.**—Three class exercises per week. The course will consist of a mathematical treatment of the fundamental principles of electricity and magnetism, and the application of these principles of circuits, systems and machines in regular commercial use. In some ways the course will be a review of all the electrical work of the two preceeding years, but for the most part the methods used will be quite different and much more comprehensive. The object of the course is to give the student a better perspective of the whole subject of applied electricity and to develop more direct methods for solving problems in this field.

9. **Electrical Design.**—Three laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

10. **Power Stations.**—Two recitations and three laboratory periods a week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or



less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

**11. Long Distance Transmission.**—Two recitations or lecture periods per week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 1 to 7 inclusive. Study of long distance line construction, protective apparatus, switchboards, cutouts, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

**12-13. Thesis.**—Two or three periods a week, first and second semesters. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first), and reports submitted from time to time, concerning the progress of the work, to the professor in charge.

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### Department of English

**PROFESSOR BATES; ASSOCIATE PROFESSOR POWERS;  
MISS YOUNG.**

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition; and to give him an intelligent appreciation of English literature.

For English 1 to 8, see the preparatory department.

**9-10. Rhetoric.**—Three recitation periods a week, throughout the year; required in the freshman year of all the courses leading to the degree of Bachelor of Science. Prerequisite, the English of the preparatory department. The main purpose of this course is to familiarize the student with the principles of rhetoric and to enable him to use them effectively in composition. To this end, written work is demanded constantly, and is carefully criticised both in the class room and in conferences between the instructor and the individual student. The work is supplemented with reading, in the choice of which the student is allowed considerable latitude.

**11-12. English Literature from 1625 to 1798.**—Three recitation periods a week, throughout the year; required in the sophomore year of the General Science and Home Economics Courses. This

course consists in a study of the literature, exclusive of prose fiction, of the ages of Milton, Dryden, Pope and Johnson. A large amount of reading and frequent papers are required. Attention is paid, in lectures, to literary movements and to the relations between literature and other phases of the life of the time.

**13-14. English Literature from 1798 to 1892.**—Three recitation periods a week, throughout the year; required in the junior or senior year of the General Science and Home Economics Courses; elective in various other courses. This course covers the literature, exclusive of prose fiction, of the ages of Wordsworth and Tennyson. Much reading and occasional papers are required. Lectures are given on nineteenth century writers and literary movements, together with their relation to other phases of the life of the time. Frequent conferences are held between the instructor and the individual student.

**15. English Literature, exclusive of Drama, from the Beginnings to 1625.**—Three recitation periods a week, first semester; elective in junior or senior year. In this course special stress is laid on ballad and epic, Chaucer, and the development of the language.

**16. English Drama from the Beginnings to 1625.**—Three recitation periods a week, second semester; elective in the junior or senior year. Shakespeare and his contemporaries receive the main emphasis.

**17-18. Scientific and Social Ideas in Recent Literature.**—Three recitation periods a week throughout the year. Required in the first semester of sophomores in Agriculture and throughout the year of sophomores in the Engineering Courses. The aim of this course is to familiarize the students in the technical departments with some of the main scientific and social tendencies of the present time as these tendencies are mirrored in current and late nineteenth century literature in England and America. Questions of art-form receive only secondary consideration, the chief stress being put upon the thought-content of the literature studied. Frequent papers and oral class reports are required.

**19-20. The English Novel.**—Two recitation periods a week, throughout the year; elective in the junior or senior year. Owing to the large amount of reading, the course counts as three hours' credit each semester.

**21-22. Biblical Literature.**—Two recitation periods a week, throughout the year; elective in the junior or senior year.

## Department of Modern Language

### PROFESSOR SPENCER; MISS WIMPLE.

A good reading knowledge of French or German, or of both, is imperative for students pursuing work along scientific, technical or historical lines, and they are indispensable as literary and cultural subjects.

Two years of German are offered in the preparatory course. In the General Science, the Home Economics and the Agriculture Courses of the College, either French or German is required during the freshman and sophomore years. Elective work in both French and German is offered and the student is strongly advised to take a third year if possible of the language chosen. In the second year German a special division read scientific German.

1. **German.**—Four recitations a week, first semester; optional in the freshman year according to above requirements. German grammar and composition; reading and telling short stories for practice in speaking German; memorizing selected poems. Text: Joynes-Meissner's Grammar.

2. **German.**—Four recitations a week, second semester. Continuation of German 1. Storms' Immensee.

1a. **German.**—Four recitations a week. More advanced work in grammar and composition, and story telling, than in German 1. Constant practice in speaking German, and reading and memorizing of German poems. Texts: *Moni der Geissbub* and *Gerstacher's Germelshausen* or *Immensee*, etc. Joynes-Meissner's Grammar.

2a. **German.**—Four recitations a week, continuation of German 1a. Constant practice in speaking German; memorizing poems and selected passages. Texts: Joynes-Meissner's Grammar. *Gerichten von Rhein*.

3. **German.**—Four recitations a week, first semester; optional in the sophomore year according to the above requirements. Prose and poetry of the last century; composition and conversation; memorizing of selected poems. Text: Joynes-Meissner's Grammar. *Geschichten von Deutschen Stadten*.

4. **German.**—Four recitations a week, second semester; continuation of German 3. Text: Schiller's *William Tell*. Additional reading and composition.

5. **German.**—Three recitations a week, first semester; elective in the junior or senior year. Written and oral composition, and readings such as Freytag's *Journalisten* and Goethe's *Hermann und Dorothea*.

6. **German.**—Three recitations a week, second semester; elective in the junior or senior year. Goethe's life and works; Goethe and Schiller; or Wenckebach's *Meisterwerke des Mittelalters*, with collateral reading.

### **FRENCH.**

1. **French.**—Four recitations a week, first semester; optional in the freshman year according to the above requirements. French grammar and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Text: Fraser and Squair's *Grammar*.

2. **French.**—Four recitations a week, second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: *Super's Reader*.

3. **French.**—Four recitations a week, first semester; optional in the sophomore year according to the above requirements. Readings from nineteenth century writers; Koren's *French composition*.

4. **French.**—Four recitations a week, second semester. Continuation of French 3.

5. **French.**—Three recitations a week, first semester; elective in the junior or senior year. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time.

6. **French.**—Three recitations a week, second semester; elective in the junior or senior year. Open to those who have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought.

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## **Department of History and Political Science**

**PROFESSOR HARDING; MISS YOUNG.**

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest

in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

For History 1 to 6, see the preparatory department.

**7. Medieval History.**—Three recitations a week, first semester; required in the sophomore year of the General Science and junior year of Home Economics Courses. A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-books, papers, reports and practices in application of the fundamental principles used in testing the value of historical material. Text: Robinson's History of Western Europe.

**8. Modern History.**—Three recitations a week, second semester; required of the same classes as History 7, of which it is a continuation. History of Europe from the opening of the sixteenth century to 1815.

**9. American History.**—Three recitations a week, first semester; elective in the junior or senior year; prerequisite, History 7 and 8. A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources.

**10. American History.**—Three recitations a week, second semester. Continuation of History 9. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

**11. Nineteenth Century History.**—Three recitations a week, first semester; elective in junior or senior year; prerequisite, History 7 and 8. A study of national development and of international relations between 1815 and 1870, prefaced by a brief survey of the French Revolution and Napoleonic Empire. A detailed study of the Restoration, the Revolution of 1848, the Unification of Italy and



the Formation of the German Empire. International relations since 1870. Present day questions of European politics. Text: Robinson and Beard's Development of Modern Europe. (Omitted in 1915-16).

**12. Contemporary American History 1877-1913.**—Three recitations a week, second semester; elective in junior or senior year; prerequisite, one year of college history. The restoration of white dominion in the south, the economic revolution, the revolution in law and politics, parties and political issues, 1877-1896; federal legislation from 1877 to 1896; last phases of the silver situation; new phase in American diplomacy; the development of capitalism; the war with Spain; expansion and its problems; the administration of Theodore Roosevelt; Mr. Taft and republican disintegration; the campaign of 1912; policies of the Wilson administration. This course will be prefaced by a rapid survey of the reconstruction era. Text book, discussions, readings and reports. (Omitted in 1915-16).

**13. American Government.**—Three recitations a week, first semester. Required in the junior year of the General Science course. General survey of federal, state, and local governments in theory and practice. Emphasis in this course is placed upon real governmental operations. Text book, discussions, and reports. Text: Beard's American Government and Politics.

**14. Political Parties and Practical Politics.**—Three recitations a week, second semesters. Required in the junior year of the General Science course. This course considers such topics as the characteristics and importance of parties, nominating methods, party machinery, campaign methods, party finance, educational and other suffrage qualifications, election laws, the spoils system, civil service reform, machines and bosses, practical politics in legislative bodies, state and local politics, and remedies for legislative evils. Text-book, discussions and reports. Ray's Political Parties and Practical Politics.

**15. Economics.**—Three recitations a week, first semester; required in the senior year of all the four year courses except the Pharmacy Course. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

**16. Sociology.**—Three recitations a week, second semester; required in the senior year of the Home Economics and General Science Courses. The fundamental principles of social science. Text-book, supplemented by lectures and special reports.

**17. The Rural Community.**—Two recitations a week, first semester. Elective for juniors or seniors in the Agricultural and General Science groups. A general survey of the field of rural sociology, including the following topics: Types of communities, movements of population, advantages and disadvantages of farm life, social conditions and life of rural people, rural health and sanitation, the various social institutions of the rural community, boys' and girls' clubs, farmers' clubs, the grange, the rural church and the rural school, an analysis of the fundamental problems of rural life; the country life movement and the reorganization of rural social forces. Lectures, readings and reports.

**18. Agricultural Economics.**—Three recitations a week, second semester; required in the senior year of the Agricultural Course, elective in other courses. The economic elements in the production and distribution of agricultural wealth, the agricultural market, determination of price, speculation, business co-operation, credit facilities, ownership and tenancy, farmers' organizations, the farmer and legislation, problems of rural social life, the relation of the farmer to the state. Text-book, lectures, readings and reports.

**19. History of the West.**—Two recitations a week, first semester; elective in the junior or senior year. A study of the settlement of the West and of the influence of the West upon national development from 1815 to 1860.

**20. History of the West.**—Two recitations a week, second semester; elective in the same courses as History 19 of which it is a continuation. A study of the economic and political development of the West, 1860 to the present.

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## Department of Education

### PROFESSOR McPROUD.

The courses in this department are organized with two specific ends in view: (a) to make clear in an introductory way the problems of the physical, mental, and moral life of the individual, and (b) to arrive at the safest, sanest and most economic ways and means of solving these problems. The courses in Philosophy aim to give a general knowledge of the facts and laws of experience with special emphasis upon the relations of mind and body and upon the practical significance of the facts and laws for practical every-day life. The

prevailing theories of life are studied with the aim of constructing in consciousness a wholesome basis for the fullest and most efficient living. The courses in Education are planned to give a clear grasp of the organization and administration of public education with special emphasis on the present theory and practice in educational procedure. The purpose is to make all courses concrete and practical.

1. **General Psychology.**—Three recitations per week, first semester; required in the junior year of the Agricultural, Home Economics, and General Science Courses. The structure and function of the nervous system; discussions of the several phases of the mental processes with special emphasis upon their origin and functions. Class room discussions, lectures, assigned readings, demonstrations and experiments. Text: Angell's Psychology.

2. **Ethics.**—Three recitations per week, second semester; required in the junior year of the Home Economics and General Science Courses. Beginnings and development of the different views of the moral life; theories of moral standards; practical problems; discussions, text-book work. Paulsen, Dewey and Tufts, Bowne, Seth and others are used as basis of the course.

3. **History of Education.**—Three recitations per week, first semester; elective in junior year. A study of the conscious effort of the human race to realize itself through educational processes from primitive times down to the present, with a view to discovering the best theory and practice of the nations at various stages of human development, and to the further end of discovering the best practice in modern education. Special emphasis is laid upon the modern period. Lectures, recitations, assigned readings, and a semester theme. Monroe's Brief Course is used as a basis of the course.

4. **School Organization and Administration.**—Three recitations per week, first semester; elective in the junior and senior years. An introduction into the history of school organization; different types of organization in Europe and America and their points of efficiency; the relation of Organization to the Administration of the Curriculum and to Instruction. Problems will be chosen to meet the needs of the class. Lectures, discussions, assigned readings, reports. Strayer and Thorndyke, Holmes, and Dutton and Snedden are used as the basis of the course.

5. **Principles of Teaching.**—Three recitations per week, second semester; elective in the junior and senior years. An application of the principles of Psychology to the technique of instruction. Prin-

ciples of instruction as used in the drill lesson, in the deductive and deductive lessons, review and examination lessons, lesson plans and lesson planning, class-room management. Strayer's Teaching Process and Bagley's Class-Room Management are used as the basis of the course.

6. **Psychology of Child Development.**—Three recitations per week, second semester; elective in junior and senior years. Psychology a prerequisite. A study of the conditions and laws of the growth and development of the physical, mental, moral and spiritual life of the child; special emphasis on the genesis of the mental powers, the nature and method, and means of their unfolding; a study of the various stages in growth and the proper treatment of each; function of the instincts in growth and development. Lectures, discussions, readings, themes. Based upon Kirkpatrick's Fundamentals of Child Study, Barnes' Studies, and others.

7. **Principles of Education.**—Three recitations per week, second semester; elective in the junior and senior years. Psychology a prerequisite. Study of psychological principles as applied to a scientific study of Education as a science; educational aims and values; the study of the science of education in its relation to individual and social needs and efficiency. A course in Educational Theory. This course differs from Principles of Teaching in that it is not the application of psychological principles to the technique of instruction; but rather is a study of the psychological foundations upon which systems of education are constructed, with a view to testing and measuring the efficiencies of those systems. Lectures, discussions, readings and reports. Based upon Henderson, Ruediger, Horne, Bagley. Elective in junior and senior years.

8. **Observation and Practice.**—Five periods per week, either semester. Daily practice and observation in the class room with full charge of a class under competent supervision. Daily lesson plans, carefully criticised, then followed by teaching. A careful study of the best pedagogical literature upon the subject taught. Offered only to seniors who have completed practically the fifteen hours in pedagogy. Elective in the senior year.

Students taking this course should arrange in the preceding semester for the work.

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### Department of Public Speaking

**PROFESSOR BROWN.**

To meet the ever increasing demands of the spoken word as a factor in leadership, and to develop skill in interpretative reading, the following courses are offered:



**1-2. Literary Interpretation.**—Three recitations per week throughout the year. Voice training, bodily expression, oral interpretation and analysis of the lyric and drama. The aim of this course is to gain a keener appreciation of imaginative literature and to render it naturally and effectively.

**3-4. Extempore Speaking.**—Two recitations per week throughout the year. Student trained to think and express himself while on his feet. Criticism on the organization and presentation of material. Attention is given to gesture, voice and such elements of grace as are essential to effective speaking. (Two sections).

**5-6. Extempore Speaking.**—One recitation per week throughout the year. This course is similar to 3-4 and is open only to students of the Engineering Department.

**7. Argumentation and Debate.**—Two recitations per week for the first semester. A study of the problems underlying conviction and persuasion. Analysis and briefing of public questions. Development of briefs into forensics and drill in their vigorous presentation. This course is especially recommended to those students who may be looking forward to taking part in intercollegiate debating.

**8. The Speech for Special Occasions.**—Two recitations per week for the second semester. A study of form for the special occasion, the speech of the president, the commemorative speech, the speech of dedication, of acceptance, of response, the speech of welcome. In addition to extempore work, written speeches will be required.

**9-10. Public Address.**—Two recitations per week throughout the year; prerequisite, Public Speaking 3-4. The Rhetoric of Oratory. A study and presentation of the various forms of public address. The writing and delivery of orations. Attention to those elements of psychology which are basic in public speaking.

**11-12. Elementary Public Speaking.**—Four recitations per week throughout the year. Articulation and flexibility of voice. The study and reading aloud of short poems, extracts from speeches for the development of ease and confidence. Extempore Speaking. Open to the pupils of the School of Agriculture. Elective in the junior or senior year.

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### Department of Mathematics

**PROFESSOR BROWN; MR. MILLS.**

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as



facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in general astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instruments, a sidereal clock and a chronograph.

For Mathematics 1 to 6, see the preparatory department.

7. **Solid Geometry.**—Three recitations a week, first semester; required in the Engineering Courses, optional in the General Science Course, freshman year; prerequisite, Mathematics 6. All the important principles of the subject will be covered. Text: Sanders' Plane and Solid Geometry.

8. **College Algebra.**—Five recitations a week, first semester; required in the Engineering Courses, optional in the General Science Course, freshman year; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9. **Plane and Spherical Trigonometry.**—Five recitations a week, second semester; required in the freshman year of the Engineering Courses; optional in the freshman year of the General Science Course; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of triangles.

11. **Analytic Geometry.**—Five recitations a week, first semester; required in the Engineering Courses, sophomore year; prerequisite, Mathematics 8 and 9.

12. **Calculus.**—Five recitations a week, second semester; required in the sophomore year of the Engineering Courses; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. **Analytic Mechanics and Calculus.**—Five recitations a week, first semester; required in the junior year of the Engineering Courses; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solution of mechanical problems.

14. **Analytic Mechanics.**—Three recitations a week, second semester; required in the junior year of the Engineering Courses.

15. **General Astronomy.**—Three recitations a week, second semester; required in the junior or senior year of the General Science, Home Economics and Engineering Courses; prerequisite, Mathematics 6. The text will be covered and frequent use made of the instruments.

## Department of Physics

**PROFESSOR MATHEWS; ASSOCIATE PROFESSOR HOY.**

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest opera chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are furnished for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectrosopes, microscopes, photometers, stereopticon (arc light), standard cells, dynamos, electrometers, transformers, galvanometers, storage batteries, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, Kelvin's current balances, lathe and wireless telegraphy and X-ray apparatus.

The following subjects are offered in this department:

For Physics 1 and 2, see the preparatory department.

3. **General Physics.**—Three recitations and two laboratory periods a week, first semester; required in the sophomore year of the Engineering Courses, elective in the sophomore, junior or senior year of various other courses. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids, heat and sound with numerous examples. Exact measurements of mass, distance, time, calorimetry, nature and velocity of sound, etc.; study of electrical and magnetic fields.

4. **General Physics.**—Three recitations and two laboratory periods a week, second semester; required in the same courses as Physics 3; young ladies pursuing the General Science Course may elect Home Economics 3 instead of Physics 4; prerequisite, Physics

3. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; refraction and reflection of light, interference and color. Laboratory work on topics mentioned.

5. **Advanced Physics.**—Four recitations and one laboratory period a week, first semester; elective in the junior or senior year; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis. Laboratory work and measurements covering topics mentioned. Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

6. **Advanced Physics.**—Four recitations and one laboratory period a week, second semester; elective in junior or senior year. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarization; laboratory work. Texts: Nichols and Franklin, Vol. 3; Nichols' Laboratory Guide.

7. **Heat.**—Three recitations and one laboratory period a week, first semester; elective in the senior year; prerequisite, Physics 5. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity, and dynamical equivalent of heat, laboratory work covering topics mentioned.

8. **Light.**—Three recitations and one laboratory period a week, second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

9. **Physics of Heat.**—Two recitations a week, second semester; required of Freshmen in the course in Home Economics; prerequisite, Mathematics 4. Theory of heat, thermometry, calorimetry, transference and conductance of heat, etc. Especial emphasis is laid on practical applications of heat.

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## Department of Botany and Plant Pathology

**PROFESSOR MICHEL; MISS ELLIOTT.**

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and function are studied, as well as

the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as a foundation for courses in forestry, plant breeding, plant pathology, etc.

The instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are well equipped with microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete, convenient herbaria of the flowering plants and fungous flora of the northern United States.

**2. General Botany.**—Two lectures or recitations and three laboratory periods a week, first semester; required in the sophomore year of the Agricultural, Home Economics and Pharmacy Courses, elective in the sophomore, junior or senior year of various other courses; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

**3. General Botany.**—Two lectures or recitations and three laboratory periods a week, second semester; required and elective in the same courses as Botany 2, of which it is a continuation; prerequisite, Botany 2.

**4. Plant Physiology.**—Two recitations and three laboratory periods a week, second semester; required in the junior year of the horticulture and plant pathology group, Agricultural Course; elective in junior or senior year; prerequisite, Botany 2 and 3.

The course deals with the most important life processes of the plant, including the properties of living matter; the general physiology of metabolism, growth, reproduction and irritability; the imitation and control of life processes.

**5. Plant Pathology.**—Two recitations and three laboratory periods a week, first semester; prerequisite, Botany 2 and 3. The first part of the term is devoted to the cause, nature and classification of the fungi, special emphasis being placed on the organisms of economic importance; the latter part of the course is devoted to the morphology of the diseases and their control, especially those

found in South Dakota. In the laboratory work the student is, as far as possible, brought into direct contact with the diseases as found in the field.

6. **Advanced Plant Pathology.**—Elective in the junior or senior year. The course will be given to such students as have had Botany 5 or equivalent work. The laboratory hours and the recitations to be arranged with the instructor. The number of credits will depend upon the amount of time given to the work, which will consist of individual laboratory work and assigned readings.

7. **Classification of Pteridophytes, Gymnosperms and Angiosperms.**—Five recitations and laboratory periods a week, first semester; elective in the junior or senior year; prerequisite, Botany 2 and 3. The systematic arrangements and classification of the ferns and their allies, and especially of the higher flowering plants. The structure and relationship of weeds, grasses and grains, and other plants of economic importance will be emphasized in the course.

8-9. **Plant Histology.**—Five recitations and laboratory periods a week, first semester; elective in junior or senior year; prerequisite, Botany 2 and 3. The work will consist in the embedding, sectioning and staining of tissues from the various groups of plants. Text-book: Chamberlain's Methods in Plant Histology.

10. **Heredity.**—Three recitations a week, second semester. The work is offered in connection with the Department of Horticulture, which will give practical work along the line of plant breeding. This course deals with the principles of variation and heredity, and their bearing upon the theory of organic evolution. The first part of the semester will be devoted to the general principles of heredity and their application to man, the latter half will deal with plant breeding and its practice in this state.

Texts: Walter's Genetics and Bailey's Plant Breeding.

11. **Pharmacognosy.**—Five recitations and laboratory periods a week, second semester; required in the first year of the Pharmacy Course; prerequisite, Botany 2. The sources, characteristics, histology, identification, etc., of the common drugs.

12. **Economic Botany.**—One recitation and two laboratory periods a week, first semester; elective in the junior or senior year. The aim will be to acquaint students with our poisonous plants and with our more common weeds. Numerous field trips will be made in the early fall.



## Entomology and Nature Study

**PROFESSOR SEVERIN; MR. GILBERTSON.**

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, there are a large number of lantern slides, microscopic slides, and alcoholic and formalin preparations. The department is well provided with all the apparatus necessary for biological work.

For Entomology 1 and 2, see the preparatory department.

3-4. **General Entomology.**—One recitation and one laboratory period a week during first semester; one recitation and two laboratory periods during the second semester; required in the sophomore year of the Agricultural Course; elective in the junior or senior year of the General Science Course. A general course dealing with the anatomy, physiology, embryology, behavior, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

5-6. **Economic Entomology.**—One lecture period and two laboratory periods a week throughout the year; elective in the junior or senior year; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects with a study of insecticides and spraying machinery. The student will be given an opportunity of preparing sprays and gases used in combatting insect pests and demonstrations will be offered in the practical application of the same.

7-8. **Systematic Entomology.**—Two or more laboratory periods a week; elective in the senior year. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give

the student an idea of the aims and methods of classification. Each student will be required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

9. **Household Pests.**—Two lectures and one laboratory period a week, second semester; elective in the senior year. The household insects and other animals that are of economic importance will be especially emphasized in this course, together with methods of extermination.

10. **Insects and Disease.**—Two lectures a week, first semester; elective in the junior or senior year. The greater share of the semester will be devoted to a discussion of the diseases which are disseminated through the insects and which affect man and domestic animals.

11. **Bird Study.**—One lecture and two laboratory periods or field excursions a week, second semester; elective in the junior or senior year. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds, while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's *Handbook of Birds of Western North America*.

12. **Nature Study.**—Three recitations a week, first semester; elective in the junior or senior year. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature point of view and the course will be a discussion of methods and materials as well as an elementary science treated from the biological side.

13. **Animal Behavior.**—Two recitations per week, first semester; elective in the junior or senior year. The evolution of animal behavior forms the principal theme of this course and is of much significance for the study and correct understanding of human psychology and sociology. This course will be useful to those engaged in educational work.

## Department of Zoology

**PROFESSOR MILLER.**

Students of Agriculture and Domestic Science as well as those of General Science, should have a thorough foundation in the principles of Animal Biology, and this is what the department aims to accomplish. Besides this it trains the students in methods of zoological research and technique, and attempts to develop original and independent thought.

Students who contemplate the study of human or veterinary medicine will find that it is to their advantage to elect advanced work in the department. These professions are biological sciences and one should have a most thorough training to enter them. For those courses which are the so-called pure scientific courses in medicine credit is usually given and the student is privileged to elect other work in the professional school.

The department is well equipped with apparatus for the courses offered. Microscopes, type specimens, skeletons, for the general courses. Microtomes, ovens, glassware, stains and reagents for the advanced work furnish as excellent equipment as one would wish. There is a small but well chosen working library of about two hundred volumes.

For Zoology 1 and 2, see the preparatory department.

**3-4. General Zoology and Physiology.**—Two recitations and three laboratory periods a week, first and second semesters; required in the sophomore or junior year of the Agricultural Course, and in the junior year of the Home Economics Course; prerequisite, Art 1 and all the subjects below the sophomore year.

**a. General Zoology.**—A study of type forms of invertebrates and vertebrates, and the elements of history and embryology. Texts and references: Hertwig's Manual of Zoology; Parker and Haswell's Text-book of Zoology; Lange's Comparative Anatomy.

**b. Physiology.**—This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and

references; Thornton's Human Physiology; American Text-book of Physiology; Landois' Human Physiology; Verworn's General Physiology.

Note—Students of Agriculture are required to take Veterinary 7 in place of Human Physiology during the last half of the second semester.

5-6. **Anatomical Methods.**—Three recitations and two laboratory periods a week, first and second semesters; required in the second year of the two-year Pharmacy Course. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to Physiology. Texts: Davidson's Mammalian Anatomy; Riegart and Jennings' Anatomy of the Cat; Morris' Human Anatomy.

7-8. **Histology.**—Five recitations and laboratory periods a week, first and second semesters; optional with Bacteriology in the junior year of the veterinary group, Agricultural Course; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements, together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's Text-Book of Histology; Wilson's The Cell; Stohr's and Szymonowicz-MacCallum's Text-Book of Histology.

9. **Vertebrate Embryology.**—Three or five hours a week, first semester. The course includes the study in the laboratory of the processes of fertilization, cleavage, principles of growth, formation of the germ layers and the foetal membranes, as well as the study of the development of some system of organs. For five hours credit the student must prepare a series of microscopical preparations of at least four stages of trout, chick and pig embryos, and make a model of the development of some organ. Students electing this course must have completed Zoology 3 and 4 or 5 and 6, or equivalent.

10. **Bacteriology.**—Five hours credit, first semester; required in the junior year of the Domestic Science and in Dairy Group of Agricultural Course; elective in General Science. The course includes the study of morphology and biology of the bacteria and special reference is made to Public Health. The laboratory work consists of technique and the study of several of the common forms of bacteria. Text: Jordan.

11. **Applied Bacteriology.**—Five hours credit; elective. Class conferences twice a week. Laboratory work on methods of air, water and soil determination. Text: Marshal's Microbiology.

12. **Comparative Anatomy.**—Three or five hours credit; second semester. A comparative study of the skeletal, digestive, vascular, nervous and unorgental systems of the vertebrate. For five hours credit, the student must make a comparative study of the development of some system in three groups, and make models.

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### Department of Chemistry

**PROFESSOR SHEPARD; ASSOCIATE PROFESSOR DUNBAR;  
MR. YOUNGBERG; MR. BINNEWEIS; MR. SHEA.**

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates one hundred and twenty students, all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates fifty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemner quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.



1. **Elementary Inorganic Chemistry.**—Five recitations and laboratory periods a week, first semester; required in the freshman year of all the courses leading to degrees; prerequisite, Physics 2. History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. **Elementary Organic Chemistry.**—Five recitation and laboratory periods a week, second semester; required in the freshman year of all the courses leading to degrees; prerequisite, Chemistry 1. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds. Text: Shepard's Elementary Organic Chemistry.

3. **Quantitative Chemistry.**—Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Agricultural and Pharmacy Courses; elective in the sophomore, junior and senior years; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores, coal, etc. Text: Olson's Quantitative Chemistry.

4. **Chemistry and Physiology of Foods.**—Five recitations and laboratory periods a week, second semester; required in the sophomore year of the Home Economics Course; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulterations. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5. **Agricultural and Sanitary Analysis.**—Five recitations and laboratory periods a week, first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.**—Three recitations a week, second semester; required in the junior year of the animal husbandry group, Agricultural Course; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.**—Three recitations a week, first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalis and gases. Demonstrations of examples, including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaching and dyeing. Text: Thorpe's Industrial Chemistry.

8. **Household Chemistry.**—Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Home Economics Course; prerequisite, Chemistry 1 and 2. Students in four year Home Economics Course intending to specialize in Chemistry should take Chemistry 3 instead of Chemistry 8. This course includes the chemistry of cooking, baking, fermentation, cleansing agents, water, soaps, inks, stains, disinfectants, preservatives, etc., as applied to good housekeeping in every day life. Lectures, notes and references.

9. **Organic Chemistry.**—Three recitation and two laboratory periods a week, first semester; elective in the junior or senior year. The Aliphatic compounds. Chemical theory and principal compounds of the paraffine series. The preparation of typical members. Typical analytical methods. Text: Perkin and Kipping, with explanatory lectures.

10. **Organic Chemistry.**—Three recitation and two laboratory periods a week, second semester; a continuation of Chemistry 9. Theory, structure, preparation and analysis of the Benzenes, Naphthalenes, Anthracenes, Pyridines, Alkaloids, Amino Acids, Terpenes, Dyes, etc.

11. **Organic Chemistry.**—Three recitations and two laboratory periods a week, second semester; required in the sophomore year of the Agricultural Courses; prerequisite, Chemistry 1, 2 and 3. An elementary course in Organic Chemistry. Includes the general theories, and typical reactions of the aliphatic and aromatic compounds. Preparatory to the practical application of this knowledge in advanced Agricultural work. Text-book: Remsen's Organic Chemistry.

12. **Elementary Chemistry as Applied to the Home and Farm.**—Five months course, third year students in School of Agriculture. Not open to regular students in four year courses. A brief study of the principal elements concerned in Agriculture. Brief discussions of germination, fertilizers, insecticides, disinfectants, cleansing agents, paints, preservatives. Feeds, rations, etc. Two recitations and two laboratory periods per week. Text: Snyder's Chemistry of Plant and Animal Life, lectures and notes.

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## **Department of Pharmacy**

**PROFESSOR WHITEHEAD.**

### **PURPOSE.**

The purpose of this department is to train young men and women in the science of pharmacy. The passage of the Food and Drug Act by Congress, and similar legislation by our own state has placed very great importance on pharmaceutical education. Under the present commercial conditions it is nearly impossible for one to prepare himself to meet the requirements of these laws except by taking a thorough college course.

The demand for educated pharmacists is becoming greater every day. In fact, even at present, some of the states will not allow one to take the examination for registration unless he is a graduate of a reputable school. This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

Graduates from the Department of Pharmacy in the State College have been uniformly successful in passing the State Board examinations, only two having failed to meet the requirements of the Board during the past sixteen years.

### **ENTRANCE REQUIREMENTS.**

Among the regulations of the South Dakota State Board of Pharmacy is the following:

"Hereafter during the year 1906, all applicants appearing for registration by examination, must present with their application an affidavit showing that they have completed a

course of study (or its equivalent) of one year high school work. In 1907, two years; in 1908, three years, and in 1909 the presentation of a high school diploma will be required. These requirements were recommended by the Association in annual meeting at Canton in 1903. It is therefore expedient that all proprietors doing a drug business in this state acquaint their clerks and apprentices with the above rule."

In order to harmonize our work with this regulation we require the completion of four years of high school work or its equivalent. While this is a much higher requirement than most schools demand, we feel that the results have justified our judgment, for at present there are but two of our graduates who have taken the state examination who are not registered.

This line of work offers many inducements to young men. The quests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The students finishing the two year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy. The two years of pharmacy work may all be applied towards the degree of Bachelor of Science. For the additional subjects required, see Pharmacy Schedule. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

The following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy.

1. **Pharmacy Latin.**—Five recitations a week, first semester, first year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Crothers and Biers, *Elements of Pharmacy Latin*.

2. **Materia Medica.**—Five recitations a week, first semester, first year. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment. Text: Potter's *Materia Medica, Pharmacy and Therapeutics*.

3. **Materia Medica.**—Five recitations a week, second semester, second year. Continuation of Pharmacy 2.

4. **Pharmacy.**—Five recitations a week, first semester, second year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's *Practice of Pharmacy*.

5. **Pharmacy Laboratory.**—Three laboratory periods a week, first semester, second year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, must be taken up in connection with it. Text: Remington's *Practice of Pharmacy*.

6. **Pharmaceutical Problems.**—Two recitations a week, first semester, second year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's *Pharmaceutical and Chemical Problems*.

7. **Pharmacy.**—Five recitations a week, second semester, second year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's *Practice of Pharmacy*, Ruddiman's *Incompatibilities in Prescriptions*.

8. **Pharmacy Laboratory.**—Five laboratory periods a week, second semester, second year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions. Must



be taken same semester as Pharmacy 7. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions. Olberg's 1,500 Prescriptions, National Formulary.

9. **Volumetric Analysis and Drug Assaying.**—Five recitations and laboratory periods a week, first semester, second year; also elective in the sophomore year of the General Science Course; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoeia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis, Lyons' Pharmaceutical Assaying; lecture notes by the teacher.

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### Department of Music

**PROFESSOR HEDGE; ASSISTANT PROFESSOR PETERSON; ASSISTANT PROFESSOR CHRISTENSEN; MISS WELCH; MISS FERGUSON.**

#### PURPOSE OF THE DEPARTMENT

The purpose of this department is to give the very best musical training possible at a minimum cost, without sacrificing the high standards of the institution.

It is generally recognized that few branches of study require greater and broader training of the mind than does the study of music, and not only cultivation of the mind, but of the emotions as well. The emotional is a phase too often neglected in education, although it has so important a part in life. In music one must learn to control—to keep in the background—one's own emotions, in order to give true expression to the thoughts of the master minds which have so wonderfully woven the beautiful harmonies.

A knowledge of music also serves to give proper balance to an education, the aesthetic side of which is too often neglected.

Our course is arranged with a view to supplying the needs more especially of those who wish to broaden themselves and to make it a part of their general education.

### ADVANTAGES

Opportunities are given for the hearing of the best music during the school year, which is a most important adjunct to proper musical education. These occasions include our high-grade faculty concerts, and an Artists' course which consists of recitals by some of the best musicians of the country. It is also planned to bring one of the Symphony Orchestras here for a concert each season.

During the past school year the following concerts, oratorios, and recitals have been given under the direct supervision of the Department of Music: Evelyn Scotney Concert Company, Oct. 17th; Royal Gwent Welsh Singers, Oct. 27th; State College Symphony Orchestra Concert, Nov. 20th; "Messiah," by Choral Union, Dec. 11th; "The First Christmas," Cantata by Chapel Choir, Dec. 20th; Thirteenth Annual Band Concert, Jan. 22nd; Gilman-Anderson Violin and Piano Recital, Feb. 11; "Rose Maiden" and "Fair Ellen," by Choral Union, March 26th; Carl Christensen String Quartet Concert, March 28th; "Faust" in concert by Choral Union, assisted by Corps de Ballet, trained by Miss Fromme, May 15th; Annual Faculty Recital, June 7th.

The following are the artists who have appeared in concerts or recitals whose names are not mentioned above: Mme. Evelyn Scotney, Soprano of Boston Grand Opera Company; Howard White, Basso-Cantante of Boston Grand Opera Company; Eric Hayne, Violinist of Boston Symphony Orchestra; Herbert Seiler, Pianist, of Boston; Gustav Holmquist, Basso of Chicago; Wilmas Anderson-Gilman, pianist of Minneapolis; Ruth Anderson, Violinist, of Minneapolis; Dr. Ray R. Moorhouse, Baritone, of Minneapolis.

In addition to these advantages, Prof. Hedge will train and direct, free to all College students and to outside singers, a choral union, a chapel choir of twenty-four picked voices, a men's glee club, and a women's glee club.

One credit a year will be given to Juniors and Seniors for choral singing in either Choral Union or Chapel Choir, provided the work is carried the full school year.

Professor Christensen will conduct the College bands and orchestra, both of which have already made an excellent reputation throughout this part of the country.

The Men's Glee Club and Orchestra have made tours during the last three years through different parts of the state and have met with great enthusiasm and success.

Recitals are also required of all students at various times during the year and attendance is obligatory upon every student in this department.

### **CONDITIONS FOR ENTRANCE**

The candidate for admission to the College must be at least fourteen years of age and of good moral character, and must have completed the work of the public schools as far as the ninth grade.

Students of music who have not completed the requirements for entrance to the freshman class will be required to take at the same time two text book subjects of the preparatory course.

### **STUDENTS' CONVOCATION**

The Music Students Convocation meets once each month at which programs are given by students or faculty. As this is part of the school work each student of music is required to be present.

### **COURSES**

Three courses are available for students of this department:

1. Preparatory.
2. Academic.
3. Collegiate.

The Preparatory Course is open to all beginners and consists of rudiments, tone production, formation of correct habits of thought and execution, etc.

The Academic Course is for those who do not desire to complete the full course, but only to become fairly proficient as performers and to secure a general knowledge of the fun-

damental principles of the art. At the completion of this course, the student is awarded a certificate of proficiency or merit.

The Collegiate Course leads to graduation and consists of three years' work. To complete this course, the student must have secured a thorough knowledge of harmony, theory and history as outlined in these respective courses. Upon its completion, the student will be given a diploma in music, provided the entrance requirements to the freshman class have been completed.

### VOICE

**PROF. HEDGE, MISS FERGUSON.**

The method used is the correct placing of the voice so that the pupil can produce with equal ease and firmness and with an even quality, all tones from the lowest to the highest. The mechanism of the voice is explained as far as necessary.

In correct breathing, correct position in singing and chest development lies the foundation of voice building.

The course of instruction is based on the Italian School of training the voice. The fundamental principle of the old Italian teachers was to poise the voice. From this comes the even scale, the range, the power to sustain, and the agility, all of which combined formed the "bel canto" or beautiful singing.

Special attention is paid to the needs of each individual, with exercises and studies carefully selected according to the requirements of each voice.

Study will be made of the interpretation of songs and ballads chosen from the best of the German, Italian, French, English and American schools, with strict attention to phrasing, enunciation and rhythm.

#### Voice Outline

First Year	Second Year	Third Year
Vocal Culture	Vocal Culture	Vocal Culture
Piano	Piano	Song Literature
Sight Reading	Harmony	Harmony
Musical History	Languages	Oratorio, Opera Airs
Languages	Ear Training	Hymnology and Church
Songs	Songs	Music
		Theory

### First Grade

The formation of tone; elementary exercises for the development of the voice and art of respiration; Seiber's thirty-six eight measure vocalises; exercises in articulation and art of phrasing; easy and pleasing songs in English.

### Second Grade

Exercises in scales, precision and flexibility; studies by Lutgen, Concone, Tosti, Vacchi; songs from German and English composers.

### Third Grade

Exercises in scales, precision and flexibility continued; advanced vocalization; songs by Schubert, Schumann, Franz, Brahms, and arias and duets from operas.

### Fourth Grade

Exercises continued as above with studies in bravoura singing. Exercises and solfeggios used, classified according to difficulty, are those of Concone, Marchesi, Lamberti and Brambilla. Recitatives and arias from the standard oratorios and operas.

For the Diploma in vocal music, the pupil must complete the courses in harmony, theory and history of music, ear training and sight reading, and must also complete the work of the academic course in instrumental music.

## PIANO

**MR. PETERSON; MISS WELCH; MISS FERGUSON.**

The study of piano is conducted with a view to balancing more perfectly the training of the mind and the cultivation of technical power. Too often stress is placed upon one or the other, more frequently the latter, to an extreme. Technique is but the means to an end; i. e., the correct interpretation of the masters, and should be so considered.

Special attention is directed from the very beginning to the student's habit of thinking. This is done largely through the method of harmonic analyses and memorizing in an orderly and concentrative manner.

The musical side of the student's personality is brought into action through intelligent and artistic interpretation and



its development is materially assisted by his having the opportunity to hear good music, artistically rendered as often as possible.

In technical development, special work is given for the acquisition of finger strength and independence, a correct position of the hand and purity of tone. Since it is now generally believed that the purest and sweetest tones are secured from direct finger action, this is much emphasized throughout the course.

These fundamental ideas are associated with the principle, the understanding of which is so necessary to the successful teacher, that effort should continually be made to render the study of the piano less irksome and as intensely interesting to the student as it can be made.

#### Piano Outline

First Year	Second Year	Third Year
Piano	Piano	Piano
Harmony	Harmony	Harmony
Musical History	Violin or Voice	Violin or Voice
Musical Literature and Analysis	Ear Training Theory	Ensemble Playing

#### Preparatory Course

Studies from Czerny, Gurlitt, MacDougall, Bach and other composers; sonatinas from Clementi, Kuhlau, Gurlitt, etc.; the easier sonatas of Haydn and Mozart, and the less difficult compositions of Schumann, Grieg, MacDowell, Schubert, Chopin and others.

#### Collegiate Course

**First Year.**—Etudes of Heller, Czerny, Foote, Loeschhorn; selections from the Bach suites and sonatas of Beethoven, Haydn and Mozart; compositions of Mendelssohn, Schubert, Chopin, Schumann, Grieg, MacDowell, etc.

**Second Year.**—Studies from Bach, (inventions and suites), Heller, Czerny, and others; sonatas of Mozart and Beethoven; solos selected from Weber, Chopin, Mendelssohn, Schumann, Grieg, MacDowell, Liszt and others; also some of the easier concertos of Mendelssohn, Reinecke, Weber, Mozart, etc.

(For examination last year, students played a movement from Weber's Concerto in C Major, a Bach invention or prelude and an

expression piece selected from some of the composers of the Romantic School.)

**Third Year.**—Studies from Bach (Well Tempered Clavichord), Chopin, Liszt, Foote; sonatas of Schubert, Beethoven, Grieg, Weber, Chopin; solo works of Mendelssohn, Weber, Schumann, Liszt, Rubinstein, Grieg, MacDowell and the modern French, Russian and American composers; concertos of Beethoven, Rubinstein, Chopin, Schumann, Saint Saens, etc.

### VIOLIN

#### MR. CHRISTENSEN.

Position, tone production on open strings, most important rudiments of musical theory in general, Hohmann's Violin School, Book 1; duets by Gebauer and Mazas; miscellaneous solos with piano accompaniment.

#### Collegiate Course

**First Year.**—Two octave scales in all major and minor keys; Sevcik, Opus 1, Book 1, Violin Technic; study of the positions, Hohmann, Book IV; studies by Wohlfart, Opus 45, Books I and II; miscellaneous solos with piano accompaniment.

**Second Year.**—Three octave scales in all major and minor keys; Sevcik, Opus 7, Violin Technic, Books I and II; Sevcik's "Four Thousand Bowings;" Kayser's Etudes, Opus 20, Books I and II; Mazas, Opus 36, Book 1, Violin Studies; solos with piano accompaniment by DeBeriot, Wieniawski, Mendelssohn, etc.

**Third Year.**—Sevcik, Opus 7, Books I and II; Sevcik's "Four Thousand Bowings;" Schradieck's Technical Studies; Mazas Studies, Opus 36, Book II; etudes by Dont and Kreutzer; solos by Wieniawski, Vieuxtemps, Mendelssohn, Bruch, Godard, etc.; concertos by Viotti, De Beriot, etc.

#### Violin or Violoncello Outline.

First Year	Second Year	Third Year
Violin or Cello	Violin or Cello	Violin or Cello
Harmony	Harmony	Harmony
Piano	Piano	Ensemble Playing
Musical History	Musical Literature and Analysis	
	Ear Training	
	Theory	

### HARMONY

#### MR. PETERSON.

In the study of harmony, the older ideas of harmonizing a given melody or figured bass are discarded as far as possible.

The student is taught from the beginning to write his own melodies for harmonization, thus, while stimulating his originality and inventive ability, taking from the study of harmony that mechanical and superfluous aspect so often too apparent to the pupil, and firmly establishing its proper place in the study of music.

In the first year (collegiate) the student receives ear training and the rudiments of harmony, including intervals, scales and chord formation, chords and their tonal relations, melody writing and simple harmonization.

In the second year, melody writing is continued, harmonization a little further developed, new chords introduced, etc.

The third year leads to altered chords and modulation, elaboration of melody, imitation, counterpoint, canon, fugues and composition in the easier forms.

This study is generally conducted in classes of four or five, but those who desire quicker advance may secure private lessons at special rates, according to the statement upon another page.

### HISTORY

The classes in the study of musical history are conducted by Miss Welch. This clearly follows the development of music and musical instruments from the earliest to the present time. This is a subject upon which every musical student should be well grounded, and some knowledge of it is essential in the general education equipment of everyone who is at all musically inclined. An examination upon this subject must be passed by all students before receiving certificates or diplomas.

### THEORY

The study of theory is conducted by Mr. Peterson. This study includes the principles of acoustics and formation of sound, together with a study of analysis of musical forms; simple songs, forms, arias, ballads, and other vocal forms; the more simple forms of dance music, leading to the higher forms of the sonatina and sonata, canon, fugue, etc.

This study is also required of all students receiving certificates or diplomas.

### EAR TRAINING

A special class in ear training and sight reading is to be included in the course for the coming year, to be conducted by a capable and experienced teacher. This study will be required of all music students.

### EXPENSES OF STUDENTS

The tuition for regular work throughout the year is listed in the table of fees below and depends upon the instructor, subjects studied, etc.

The terms and prices to the student of the five months' course in Agriculture will be the same as that for the regular semester, as given below.

### FEEES

The following fees will be charged a semester for instruction:

#### Prof. Hedge

Voice—

Two half hour lessons per week, major work.....	\$32.00
One half hour lesson per week, minor work.....	18.00

#### Mr. Christensen

Violin, Viola, Cello and Band Instruments—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work.....	17.00

#### Mr. Peterson

Piano—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work.....	17.00

#### Miss Welch

Piano—

Two half hour lessons per week, major work.....	\$26.00
One half hour lesson per week, minor work .....	15.00

#### Miss Ferguson

Voice and Piano—

Two half hour lessons per week, major work.....	\$26.00
One half hour lesson per week, minor work .....	15.00

Harmony, history, theory, ear training, sight reading, etc., in classes, free to all students in voice, piano or violin.

Private lessons in harmony may be obtained for the additional fee of \$10.00 a semester. Students desiring private lessons in harmony and studying in more than one department, for example, both voice and piano departments, will be given a discount of \$5.00 a semester to cover the free theoretical work to which they are entitled in each of these departments.

Practice pianos may be used at the following rates a semester:

One hour a day, \$4.00.

Two hours a day, \$7.00.

Three hours a day, \$9.50.

Four hours a day, \$12.00.

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### Department of Art

**MISS CALDWELL; MISS GODDARD.**

The aim in arranging the subjects in this department has been to offer such work as will correlate with other college courses in becoming a means to a general education.

The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs and with such tools as are necessary for class work.

Two courses of study are offered, the preliminary work in each being the same. One course includes the study of form and color, and the other the principles of design and their application in various crafts. A diploma is given students who satisfactorily complete either course. The time necessary to secure a diploma depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course. The course in academic drawing and painting includes drawing from cast and still life, painting and art history, (courses 6, 7, 8, 9, 10, 11, 12, 13). The course in applied design includes a year of drawing, two years of design and handicraft, with a year of art history, (courses 4, 5, 6, 7, 8, 9).



Any advanced student wishing to study the technique of pen and ink will be given individual instruction in that subject.

For Art 1 and 2 see the preparatory department.

3. **Theory of Design.**—Two recitations a week, second semester; required in the sophomore year of the Home Economics Course. This subject treats of the principles of design and their practical application in the home.

4-5. **Applied Design.**—Two laboratory periods a week, first and second semesters; required in the senior year of the Home Economics Course; elective in the senior year of the General Science Course; prerequisite, Art. 1. One period a week for lecture and criticism of original designs and three periods for the working out of these designs in the various crafts of basketry, stenciling, weaving, leather, woodcarving, metal work and jewelry. Students wishing a diploma are required to continue the study of design for a second year and study the principles of the crafts they have not included in their first year's study of applied design.

6. **Art History.**—Two recitations a week, first semester; required in the senior year of the Home Economics Course, elective in the senior year of the General Science Course. This course aims to acquaint the student with the styles of historic architecture and with prominent buildings illustrative of each style.

7. **Art History.**—Two recitations a week, second semester; required in the senior year of the Home Economics Course, elective in the senior year of the General Science Course. A study of great schools of painting. Reference books in the general library and a collection of photographs in the department furnish material for this course.

8. **Charcoal Drawing.**—Five hours a week, first semester; elective to students pursuing special work in art. Drawing from simple casts in outline and in light and shade.

10. **Charcoal Drawing.**—Five hours a week, first and second semesters; elective to students pursuing special work in art. Drawing of heads and figures in full light and shade from casts, sketching from pose; prerequisite, Art 8.

11. **Study of Values.**—Five hours a week, first semester; elective to students pursuing special work in art. Value studies in charcoal from still life as preparatory work for painting; prerequisite, Art 1-2.

12-13. **Painting.**—Two laboratory periods a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 8. Study of color and technic of painting in oil, pastel, and water color from still life and flowers.

14. **Drawing.**—Two laboratory periods a week; required in the freshman year of the Home Economics Course. This course will include object and nature drawing with pencil and pen and ink, for the study of proportion, perspective, light and shade, and pencil and pen technic, thus enabling the student to express the appearance of objects.

15. **Theory of Design and Handicraft.**—Basketry and stenciling. Students are required to work out their own designs for each problem.

15a. **Theory of Design and Handicraft.**—Leather tooling and weaving. Planning of designs and color harmonies for all problems.

16. **Design for Needlework.**—One hour a week, first semester. This work is offered in connection with the course in needle craft in the Home Economics Department.

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## Department of Military Science and Tactics

**LIEUTENANT DITTO, Commandant.**

The work of this department is conducted in accordance with War Department orders promulgated pursuant to Acts of Congress.

Instruction in military science and tactics in educational institutions throughout the United States forms a part of the present general system of military training; its function is to impart to the college youth of the land knowledge of the elements of military science and the duties of the soldier in the garrison and in the field in order that the people may receive the benefit of more efficient service when final resort to arms to sustain the national honor or to enforce the laws shall become necessary.

Direct benefits of lasting value are received by the individual cadet which contribute to strengthen his physique and mentality, the better to fit him for the duties of life.

The instruction is both practical and theoretical, as follows:

### **PRACTICAL.**

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty. Three hours a week; required of all able bodied male students of the sophomore, freshman and preparatory classes, the school of agriculture, and special students; optional for seniors and juniors, who may elect further work in the department subject to approval; they may also be required to turn out on special occasions by direction of the commandant upon approval of the president.

### **THEORETICAL—REQUIRED.**

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty; army regulations. This course is progressive and required for commissioned and non-commissioned officers, one hour a week, one semester, or equivalent. Lectures by the Commandant on various military subjects will be delivered monthly before all cadets. Elements of Military Science; additional requirement for sophomores, one hour a week, second semester.

### **THEORETICAL—ELECTIVE.**

Field Service Regulations and Military Engineering. Junior year, first semester, one hour a week.

Applied Tactics. Junior year, second semester, one hour a week.

Military Law. Senior year, first semester, one hour a week.

International Law. Senior year, second semester, one hour a week.

Further advanced work may be elected with appropriate credit, subject to the approval of the faculty.

All students herein referred to constitute the corps of cadets and are organized for the purpose of drill and administration as an infantry battalion, with a band to which qualified cadets are specially assigned.

The appointment and promotion of commissioned and non-commissioned officers are made in accordance with merit by the commandant subject to the approval of the president.

The College is provided by the U. S. government with the equipment necessary to conduct the department. Each cadet must provide himself with the prescribed uniform. The complete uniform will be worn at all drills and other exercises.

The following is an extract from war department orders:  
"Upon the graduation of every class, the professor of military

science and tactics, after consultation with the president of the college \* \* \*, will decide upon and report to the Adjutant General of the Army the names of such students belonging to the class as have shown special aptitude for military service, and will furnish a copy of his report to the Adjutant General of the state for his information."

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## Department of Commerce

### **PROFESSOR SCHLATTER.**

The department of commerce offers two courses of study :

(1). The Secretarial Course for students who have completed a high school course of three or more years. The work of the course may be counted towards the completion of the entrance requirements to the freshman year of the college, under certain restrictions imposed by the committee on entrance requirements—and also depending upon the additional work that has been done by the student. However, it frequently happens that such students have no intention of pursuing a regular collegiate course of study, but are obliged by force of circumstances to take a one-year's business course preparatory to office work. These students welcome the opportunity of securing a commercial education in a college atmosphere.

(2). The regular commercial course combines preparatory subjects with business branches and covers a period of four years. This course is valuable to the student who desires to obtain a broad general knowledge with his commercial training. The student also gets regular credit for the work toward admission to the freshman year of college, in case he wishes to continue his education. Many students, in fact, take the business subjects in order to learn some method of earning their future college expenses.

All stenographic courses are so arranged that students are given considerable actual office practice during the second semester just before completing the course. The idea is to train the student for immediate service in office work, and to minimize the customary bungling of the "beginner."

Positions. The demand for our graduates far exceeds the supply. Hardly a week passes that we are not asked to recommend some young man or woman for office work. There are usually three to five positions for every student.

Brookings is now a regular point for the holding of Civil Service examinations. Students who desire to take the examinations are

encouraged to do so and are given all the preparation possible.

Those who have not completed the equivalent of at least three years of a high school course should follow the course in commercial science as outlined in the schedule of the preparatory department. Shorthand students are required to have had a preliminary English training of about three years.

Under certain restrictions, collegiate students are permitted to take electives in Business Law, and Theory of Money and Banking.

## THE SECRETARIAL COURSE

### FIRST SEMESTER.

**Business Law.**—Three recitations a week. This subject includes practical analysis of contracts; negotiable paper; agency; partnership and corporations; personal and real property; surety, guaranty and insurance; the management of decedents' estates. Lectures and text-book work supplemented with the study of actual cases. Special lectures by local and visiting attorneys.

**English.**—Three recitations a week. Either freshman rhetoric or the English of the fourth preparatory year. This is to give practice in composition, supplemented with reading. This course is intended to develop the power of writing correct English.

**Shorthand.**—Five recitations a week. Theory, drills to develop ability in writing sounds. Study of word-signs; simple dictation. Gregg system.

**Typewriting.**—One hour a day. Drills for learning keyboard by touch method; business and legal forms; manifolding and letter press; mimeographing; care of machine. Each student will be made familiar with standard typewriters.

**Accounting.**—Three double periods a week. A brief course to acquaint the student with the elements of business bookkeeping, the knowledge of which is essential, whether actually used by the student or not.

### SECOND SEMESTER.

**Money and Banking.**—Three recitations a week. A theoretical and practical study of money and credit funds; their instruments of transfer; the commercial bank; savings bank; trust company; organization and operation of various banking institutions; legal regulations. A practical course not usually given in commercial schools.

**English.**—Three recitations a week. A continuation of the first semester's course. Too thorough a study of English cannot be made by the student who expects to become a first-class secretary.

**Shorthand.**—Five recitation periods a week. A practical continuation of the work of the first semester. Dictation, including all



forms of correspondence and legal matter; polite letter writing; terse business diction; special practice anticipating certain office work or civil service.

**Typewriting.**—Five to ten hours a week. To be taken in connection with the Shorthand.

**Secretary Practice.**—Five laboratory periods a week. Afternoon practice with college officers or business firms in town. Each student will be carefully "checked up" on this work. The practice will be of great value in giving preliminary experience, and will remove the fear of entering the first regular office work upon graduation.

### THE REGULAR COMMERCIAL COURSE.

The following subjects are offered in the regular four-year course in commercial science. For complete schedule see outline of preparatory course.

1. **Commercial Correspondence.**—Three periods a week, first semester. A practical course designed to teach the student to write creditable and up-to-date business letters in natural and conversational English. Particular attention will be paid to penmanship.

2. **Commerce and Industry.**—Three periods per week, second semester. Continuation of work of first semester; study of industry and commerce, local, national, and international. This course will be illustrated by the use of a commercial museum now being collected. The student will be required to learn the use of government reports and other sources of information in collecting data.

3. **Bookkeeping.**—Three laboratory periods per week, first semester. Single and double entry studied as in actual business; the aim being to acquaint the student with the fundamental principles of bookkeeping. Students who are deficient in penmanship will be required to take course 1.

4. **Bookkeeping.**—Three laboratory periods per week, second semester. Advanced bookkeeping, affording practice with the more complex books and forms used in modern offices. Special attention given to the accounting books of commission, general merchandise, wholesale and retail business, manufacturing and banking. By the use of separate price lists, each student will be obliged to do independent study and thinking. In this course the student becomes familiar with the uses of various kinds of commercial paper and office practice.

5. **Shorthand.**—Five recitations per week, first semester. In this course the student masters the theory of shorthand; dictation of

simple business letters to develop facility in handling writing materials; drills on principles, characters and word-signs. Gregg shorthand is taught. Nothing but the very best work is accepted, for it is time wasted to prepare second and third rate stenographers for office work.

6-8. **Typewriting.**—Five periods a week, first semester. Five to ten periods a week, second semester. Graded exercises to learn machine by touch method; care of machine; correspondence and legal forms; manifolding and mimeographing; billing and tabulating. The work of the second semester will be based upon shorthand dictation. The student will be required to develop the ability to read and transcribe his notes readily and accurately. Each student is to collect a portfolio of his typewritten work which has been accepted by the instructor of typewriting.

7. **Shorthand.**—Five recitations per week, second semester. Dictation of business letters and general matter to develop speed; legal forms; civil service matter. The student is not allowed to develop speed carelessly, at the expense of legibility. With this course, the student makes a study of commercial correspondence and the most approved forms in letter composition. All dictated matter is transcribed on the typewriter.

9. **Business Law.**—Three recitations a week, first semester. Designed to acquaint the student with the fundamental principles of business law, supplemented with a study of actual cases illustrative of these principles. A topical analysis of contracts; negotiable paper; agency; partnership; corporations; guaranty; sale of chattels; stoppage in transit; payment; law of tender; liens; bailment; insurance; probate matters and real estate conveyances.

10. **Money and Banking.**—Three hours per week, second semester. A theoretical and practical study of the history of money; nature and uses of money; classification of banks; bank circulation; deposits and loans; officers of banks; collections; reserves; legal regulations; clearing houses; loan and trust companies. Open to seniors, secretarial, and college students only.

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### Preparatory Department

#### PROFESSOR FORSEE.

For the benefit of students who do not have high school advantages a preparatory department is maintained. This course, whose work extends over four years, contains certain

required subjects that are considered necessary to a liberal education. The remaining work may be chosen from a large list of elective subjects. The student who pursues the course may thus secure a good preparation for entering upon more advanced work or training for practical life.

The course conforms to the admission requirements as far as the conditions in the College permit. Students will be admitted to the college courses upon the completion of the required subjects and an additional amount of work chosen from the elective subjects to make fifteen units, a unit being five hours a week throughout the year. This requires about three hours of elective work a week in addition to the required subjects during the four years.

### PREPARATORY COURSE.

#### First Year

##### First Semester—

English Composition, a 5 .....	English	1
Arithmetic (Including Metric System), a 5.....	Mathematics	1
Civics, a 5 .....	History	2
Business Correspondence and Penmanship, a 3...	Commerce	1
or		
Freehand Drawing, b 3 .....	Art	1
Military Tactics, 3 .....		
Elective, a & b 3 .....		

##### Second Semester—

English Composition, a 5 .....	English	2
Beg. Algebra, a 5 .....	Mathematics	2
Physiography, a 4 .....	Physiography	1
Commerce and Industry, a 3 .....	Commerce	2
or		
Freehand Drawing, b 3 .....	Art	2
Military Tactics, 3 .....		
Elective, a & b 3 .....		
For list of preparatory electives, see the following pages.		

#### Second Year

##### First Semester—

English Composition and Rhetoric, a 5 .....	English	3
Algebra, a 5 .....	Mathematics	3
Elementary Biology, a 3, b 2 .....	Entomology	1
Military Tactics, 3 .....		
Elective, a & b 3 .....		

**Second Semester—**

English Composition and Rhetoric, a 5 .....	English	4
Algebra, a 5 .....	Mathematics	4
Elementary Biology, a 3, b 2 .....	Entomology	2
Military Tactics, 3 .....		
Elective, a & b 3 .....		
For list of preparatory electives, see the following pages.		

**Third Year****First Semester—**

American Literature, a 4 .....	English	5
Plane Geometry, a 4 .....	Mathematics	5
German, a 5 .....	German Pr	1
Greek History, 3 .....	History	3
Military Tactics, 3 .....		
Elective, a & b 3 .....		

**Second Semester—**

American Literature, a 4 .....	English	6
Plane Geometry, a 4 .....	Mathematics	6
German, a 5 .....	German Pr	2
Roman History, a 3 .....	History	4
Military Tactics, 3 .....		
Elective, a & b 3 .....		
For list of preparatory electives, see the following pages.		

**Fourth Year****First Semester—**

English Literature, a 3 .....	English	7
Elementary Physics, a 3, b 2 .....	Physics	1
German, a 5 .....	German Pr	3
English History, a 3 .....	History	5
Military Tactics, 3 .....		
Elective, a & b 3 .....		

**Second Semester—**

English Literature, a 3 .....	English	8
Elementary Physics, a 3, b 2 .....	Physics	2
German, a 5 .....	German Pr	4
American History, a 3 .....	History	6
Military Tactics, 3 .....		
Elective, a & b 3 .....		
For list of preparatory electives, see the following pages.		

**PREPARATORY ELECTIVES.****First and Second Years.****First Semester—**

Freehand Drawing, b 3 .....	Art	1
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Carpentry, b 3 .....	Mechanical Engineering	1
Elementary Agriculture, a 3 .....	Agriculture	1
Sewing, b 3 .....	Home Economics	1
Bookkeeping, b 3 .....	Commerce	4
Business Correspondence, a 3 .....	Commerce	1
Typewriting, b 2 .....	Commerce	6

**Second Semester—**

Freehand Drawing, b 3 .....	Art	2
Forging, b 3 .....	Mechanical Engineering	2
Elementary Agriculture, a 3 .....	Agriculture	2
Cooking, b 3 .....	Home Economics	2
Bookkeeping, a 3 .....	Commerce	4
Typewriting, b 2 .....	Commerce	8
Commerce and Industry, a 3 .....	Commerce	2

**Third and Fourth Years.****First Semester—**

Freehand Drawing, b 3 .....	Art	1
Sewing, b 3 .....	Home Economics	1
Carpentry, b 3 .....	Mechanical Engineering	1
*Shorthand, a 5 .....	Commerce	5
Elementary Agriculture, a 3 .....	Agriculture	1
Typewriting, b 3 .....	Commerce	6
Elementary Physiology, a 2, b 1 .....	Zoology	1
Mechanical Drawing, b 3 .....	Mechanical Engineering	5
Business Law, a 3 .....	Commerce	9
Bookkeeping, b 3 .....	Commerce	3

**Second Semester—**

Freehand Drawing, b 3 .....	Art	2
Cooking, b 3 .....	Home Economics	2
Bookkeeping, b 3 .....	Commerce	4
Forging, b 3 .....	Mechanical Engineering	2
Mechanical Drawing, b 3 .....	Mechanical Engineering	5
Typewriting, b 3 .....	Commerce	8
*Shorthand, a 5 .....	Commerce	7
Elementary Agriculture, a 3 .....	Agriculture	2
Elementary Physiology, a 2, b 1 .....	Zoology	2
Money and Banking, a 3 .....	Commerce	10

\*Students taking Shorthand will be allowed to substitute typewriting for Greek History and Roman History, or for English History and American History.



### **School of Agriculture** **PROFESSOR STIVERS.**

The School of Agriculture has for its specific purpose the training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farm and in the homes to help the parents during the busy season of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

While the subjects of study consist primarily of those that relate to farming and household economy, they include also such subjects as are usually given in a regular high school course. For example, English, mathematics, history, civics, chemistry, physics and biology. The technical topics include studies in soil, plants and crops, domestic animals, feeds and feeding, cooking and sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Demonstrations are given in the classrooms, laboratories, kitchen and sewing rooms, barns, greenhouses, orchards and fields.

The School of Agriculture welcomes earnestly and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

The tuition is six dollars for the year, with a small fee for each laboratory in which work is taken.

#### **COURSES OF STUDY**

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work.

### FOUR YEAR COURSE FOR YOUNG MEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of times a week, "a" meaning class work, "b" laboratory work.

Penmanship and Spelling .....	a 2
English .....	a 4
Arithmetic or Algebra .....	a 4
Poultry Culture .....	a 2
Farm Crops .....	a 3, b 2
Stock Judging .....	b 2
Horticulture .....	b 1
Carpentry .....	b 3
Lectures on Science .....	a 2
Military Drill .....	3

#### Second Year

Biology .....	a 5
Farm Accounts .....	b 1
English .....	a 4
Algebra .....	a 4
Dairying .....	a 1, b 2
Horticulture .....	b 1
Blacksmithing .....	b 3
Military Drill .....	3

#### Third Year

Civics .....	a 3
Elementary Chemistry .....	a and b 4
English .....	a 4
Plane Geometry or Algebra .....	a 4
Farm Machinery .....	a 2
Entomology .....	a 1, b 1
Stock Feeding .....	a 5
Military Drill .....	3

#### Fourth Year

History (includes lectures on Co-Operation) .....	a 4
English .....	a 4
Elementary Physics .....	a 2, b 2
Physiology .....	a 1, b 1
Veterinary Science .....	a 3
Soils .....	b 3
Breeds and Breeding .....	a 2, b 1
Military Drill .....	3

### FOUR YEAR COURSE FOR YOUNG WOMEN.

#### First Year

Penmanship and Spelling .....	a	2
English .....	a	4
Arithmetic or Algebra .....	a	4
Freehand Drawing .....	b	2
Poultry .....	a	2
Cooking .....	a 1, b	3
Sewing I .....	b	3
Dairying .....	b	1
Horticulture .....	b	1
Lectures on Science .....	a	2
Physical Training .....		3

#### Second Year

Biology .....	a	5
Farm Accounts .....	b	1
English .....	a	4
Algebra .....	a	4
Food, Dietetics and Serving .....	a 1, b	2
Household Management .....	a	1
Art Needlework .....	b	2
Craft .....	b	1
Physical Training .....		3

#### Third Year

Civics .....	a	3
Elementary Chemistry .....	a and b	4
English .....	a	4
Plane Geometry or Algebra .....	a	4
Textiles and Sewing II, Laundering .....	a 1, b	3
The House .....	a	2
Craft .....	b	1
Physical Training .....		3

#### Fourth Year

History (includes lectures on Co-Operation) .....	a	4
English .....	a	4
Elementary Physics .....	a 2, b	2
Physiology .....	a 1, b	1
Sewing III and Millinery .....	b	2
Advanced Cookery and Invalid Cookery .....	a 1, b	2
Home Nursing and Emergencies and Care of Children .....	a	2
Physical Training .....		3

## The Summer School

**PROFESSOR STIVERS, Director.**

For a number of years the College has conducted a short summer session in conjunction with the Brookings County Teachers' Institute. In 1914 the College authorities felt that the time had come for the College to extend its summer work to a session of six weeks. The results were very gratifying, for after the close of the teachers' institute, a large number of students remained to continue their work in the College.

The work of the summer session was planned especially for those who might wish to take work along industrial lines—in Agriculture, Manual Training, Home Economics and allied subjects—either for the purpose of preparing themselves to teach in the public schools, or to secure College credits. The College offers many advantages to the public school teachers of the state. During the last few years the demand for teachers of vocational subjects has increased much more rapidly than the supply. Here the student has the opportunity of getting practical training along with the theoretical work by having access to the laboratories, shops, and other equipment of the College.

In addition to the members of the regular College staff a number of special instructors and lecturers were employed to give instruction during the session. Among these were the following: Gertrude Stedman, Superintendent of Schools, Brookings County, Rural Methods; Ada M. Pratt, Deputy Superintendent of Schools, Brookings County, Grammar; Georgia B. Elwell, Teacher Domestic Art, East High School, Minneapolis, Domestic Art; H. C. Johnson, Ph. B., A. M., Superintendent of Schools, Aberdeen, S. D., American Literature, South Dakota History and Grammar; Mrs. Hattie Moore Mitchell, Supervisor of Primary Work, Drake University, Primary Methods and Drawing; Mrs. Myra K. Peters, Supervisor of Music in Public Schools, Lead, S. D., Public School Music and Folk Dancing; F. E. Brown, Professor of Public Speaking, Drake University, Methods in Reading;

Henry S. Curtis, Ph. D., Former Supervisor of Playgrounds, Washington, D. C., Organized Play; F. F. Von Court, Palmer School of Penmanship, Cedar Rapids, Ia., Penmanship and Farm Accounts; Dr. P. P. Claxton, United States Commissioner of Education, Washington, D. C.; J. Adams Puffer, Director Beacon Vocation Bureau, Boston, Mass.; William McKeever, Professor of Education, Kansas State College; Dr. B. H. Hibbard, Professor of Rural Economics, University of Wisconsin; C. G. Lawrence, Superintendent of Public Instruction, Pierre, S. D.; Prof. H. I. Jones, Dakota Wesleyan University, Mitchell, S. D.

During 1915 the summer session of six weeks will begin June 7th. In connection with the session, a joint institute of Hamlin, Beadle, Moody, Miner and Brookings counties will be held, beginning June 7th and closing June 18th. Those wishing detailed information concerning it should write to the President for the Summer School Bulletin.

### **Short Industrial Courses**

Special work is offered in the various industrial departments for the benefit of those who can not avail themselves of the opportunities offered in the longer courses. These short courses are becoming a very attractive and profitable feature in the lives of many who can get away from their homes only at the time of the year when the work is offered, and persons of all ages, young and old, are found working side by side in these classes, to improve the conditions of their lives in the home and on the farm. A special effort is put forth to make the work interesting and specialists from other institutions are often engaged to assist in the instruction.

Since much of this work is adapted to the needs of the persons enrolled for it, the courses cannot be very fully described here. For a more detailed description of any particular work, address inquiries to the department concerned or to the President of the College.

The different courses are mentioned below:



**THE FARM AND HOME COURSE****December 27 to January 1.**

This course will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects.

**ONE WEEK COURSE FOR CREAM TESTERS.****December 13 to December 17.**

During the past few years there has been a demand for a short course giving instruction in testing cream for butterfat and per cent acidity, and as to the proper method of handling cream. This demand has come largely from cream buyers. Since the state law, which requires all operators of the Babcock test to pass an examination and take out a license, went into effect, the requests for such a course have increased.

To fill this want the Dairy Husbandry Department will give a one week course. The fee will be two dollars. Opportunity for examination will be given immediately after this course. All licenses expire January 1.

**THE THREE MONTHS' CREAMERY COURSE.****January 5 to March 31.**

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending College, as by this means it is found that much greater benefit is derived from the work at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demands a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the

“reason why” for many of our daily operations. The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from \$50 to \$125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered:

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and bookkeeping.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

The tuition is four dollars for the three months' term with a small additional fee for laboratory expenses.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

### **COURSE IN TRACTION ENGINEERING.**

**January 5 to June 2.**

Modern agricultural methods have introduced the steam and gas engine, as a substitute for animal power, in such a marked degree, that the consequent growing demand for traction engineers has led the College to arrange a five months' course for the special training of such engineers. Extreme care has been taken to offer only such work as will prove valuable to the man running the traction engine and other machinery. A relatively large amount of shop work and engine practice is introduced.

For the work in engine practice several of the most modern types of both steam and gas traction engines are available. Enough time is devoted to this part of the work to make each student thoroughly familiar with all of the engines, and able

to operate them satisfactorily in actual practice. The engine practice work generally starts as soon as the frost is out of the ground, or about April 10th, and continues to the end of the term.

A proper proportion of recitations in closely allied subjects is also included in this course.

The tuition is eight dollars for the entire course with a small amount extra for laboratory fees.

Upon the satisfactory completion of the work the student is given a certificate which is virtually the same as a license to run an engine in this state.

Students who desire to take this course are expected to pass a satisfactory examination in arithmetic, to read intelligently and to show such general elementary training as will indicate that they are able to understand the subjects embraced in this course.

The work offered is as follows:

Arithmetic .....	a	5
Heat Engines and Elementary Physics .....	a	5
Stock Judging or Civil Government .....	a	2 ½
Steam and Gas Engine Lectures .....	a	2 ½
Forging .....	b	2 ½
Mechanical Drawing .....	b	2 ½
Engine Practice .....	b	2

# College Alumni

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## ALUMNI ASSOCIATION.

E. H. Sexauer, '10	President
H. H. Hoy, '96	First Vice-President
Manley Champlin, '09	Second Vice-President
Vey Valentine, '14	Third Vice-President
H. B. Mathews, '92	Secretary and Treasurer

### Class of 1886.

## BACHELOR OF SCIENCE.

Sayler, Marcus A.	Fruit Grower, Orland, Cal.
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### Class of 1888.

## BACHELOR OF SCIENCE.

Aldrich, John M.	.....
With U. S. Bureau of Entomology, 238 S. Grant St., Lafayette, Ind.	
Lawrence, Philip A.	Attorney, Fargo, N. D.
Wellman, Lulah (Hewes)	Lakewood, N. Y.

### Class of 1889.

## BACHELOR OF SCIENCE.

Boswell, Katie (Arnold)	Kennebec
Cranston, Mary (Crane)	04303 Lincoln St., Spokane, Wash.
Cross, Alvah G.	.....
Eno, Durell G.	Merchant, Platte
Grady, Francis A.	Attorney, Crookston, Minn.
Haber, Sarah (Cunningham)	1015 Grand Blvd., Spokane, Wash.
Korstad, Hans	Rural Mail Carrier, Brookings
Larson, Lars K.	Bank Cashier, Dell Rapids
Lawshe, Grace (Brooke)	.....
.....	Cashier Dept. Store, 1649 Ashland Ave., St. Paul, Minn.
McKenney, Duston W.	.....
..	Supervisor Manual Training, 302 Lewis Ave., Billings, Mont.
McLouth, Lewis C., Gen. Mgr. Miniature Sales Co.	.....
.....	1228 Chamber Com., Detroit, Mich.
Mork, Albert A.	Farmer, Grelland, N. D.
Roe, Ellen (Aldrich)	Died Dec. 8th, 1897, at Helena, Mont.
Rogers, Edmund	Machinist, 104 Eleventh St., Milwaukee, Wis.
Ross, Carrie (Orcutt)	518 W. Third St., Northfield, Minn.
Ross, Abbie (Wesche)	Webb, Ia.
Wardall, Anna (Scott)	.....
.....	Osteopath, 3201 Forty-first Ave., S. W., Seattle, Wash.

## Class of 1890.

## BACHELOR OF SCIENCE.

- Allen, William C. ....Died in Chicago  
 Day, John M. ....Farmer, Ekalaka, Mont.  
 Duffey, Maggie (Irish) .....4206 Castleman Ave., St. Louis, Mo.  
 Egeburg, Hildus .....Farmer, Brookings  
 Haasarud, Ole H. ....Farmer, Bratsburg, Minn.  
 Harkins, Lilla A., Prof. of Dom. Science.....  
 .....Montana Agricultural College, Bozeman  
 Hopkins, Cyril G., Prof. of Agronomy, Chemist and Vice Director  
 of Experiment Sta., U of Illinois, 1001 S. Wright St., Champaign  
 Jenkins, John C. ....Attorney, 815 Spalding Bldg., Portland, Ore.  
 Kenyon, Arthur H. ....Lawyer, 1315 Mallon Ave., Spokane, Wash.  
 Pyne, Estel W. ....Capitalist, 633 S. Union Ave., Los Angeles, Cal.  
 Roe, Guy W. ....State Mgr. Union Fibre Co., Yorktown, Ind.  
 Stoner, Minna A., Prof. of Home Economics.....  
 .....N. D. Agricultural College, Fargo, N. D.  
 Wardall, Norman M., Deputy County Auditor .....  
 .....2215 41st Ave., S. W., Seattle, Wash.

## Class of 1891.

## MASTER OF SCIENCE.

- Aldrich John M., With U. S. Bureau of Entomology, Lafayette, Ind.

## BACHELOR OF SCIENCE.

- Aldrich, Irwin D., Editor and Sec. State Board of Regents, Big Stone  
 Bell, William D. ....Editor, St. James, Minn.  
 Bentley, Wm. S. ....Physician, Hot Springs  
 Chamberlain, Jennie (Spooner) .....  
 .....Physician, 813 4th Ave., Detroit, Mich.  
 Crane, Austin B., Prof. of Math. and Civil Eng., Spokane Univ.  
 .....04303 Lincoln, St., Spokane  
 Davis Homer .....Physician, Genoa, Neb.  
 Dillon, Willis C. ....  
 Doughty, Hettie (Dibble) .....Beresford  
 Frick, Mary (Magaw) .....903 W. Zumbro St., Rochester, Minn.  
 Hann, Jay B. ....Photographer, Bellingham, Wash.  
 Houston, Grant .....Physician, Joliet, Ill.  
 Irish, Henry C., Horticulturist, 4206 Castleman Ave., St. Louis, Mo.  
 Lewis, Perry .....Inventor, 101 E. Cherry St., Mankato, Minn.  
 Robinson, Alice (Haberlein), 1710 Arlington Ave., Los Angeles, Cal.  
 Shannon, Fanny (Fourt) .....Fairfield, Iowa  
 Solberg, Halvor C. ....Prof. Steam and Mechanical Eng., S. D. S. C.  
 Updyke, Nora (Bacon) .....2211 Elizabeth St., Pueblo, Colo.  
 Valleau, Vinal B. ....Moving Picture Theaters, Albert Lea, Minn.



West, Hugh H. .... Physician, Spurling Bldg., Elgin, Ill.  
 Wolgemuth, Lee E. .... Real Estate, Hamilton, Mont.

### Class of 1892.

#### BACHELOR OF SCIENCE.

Austin, Steven E., Mechanical Engineer .....  
 .....Cor. Harrison St. and 42 Court, Chicago  
 Davis, Samuel H. .... Farmer, Beaverton, Ore.  
 Griffiths, David, Asst. Agrostologist .....  
 .....Dept. of Agriculture, Tacoma Park, Washington, D. C.  
 Hamlin, John R., Jr. .... Merchant, Hawthorne, Cal.  
 Harding, Albert S., Prof. of History & Political Science, S. D. S. C.  
 Hatfield, Ira A. .... Died Feb. 8th, 1914, at Lincoln, Neb.  
 Keeney, Emma A. .... Physician, Silver Lake, Ore.  
 McAndrew, James E. .... Lawyer, 808 Realty Blk., Spokane, Wash.  
 McLouth, Ida B. .... Died Aug. 27, 1899, at Short Beach, Conn.  
 Madden, Marguerite (Akin) ..... Brookings  
 Mathews, Hubert B. .... Prof. of Physics, S. D. S. C.  
 Plocker, Eva (Mathews) ..... Brookings  
 Schlosser, Thomas F. .... Clergyman, Carlton, Ore.  
 Sloan, Nettie (Torrence) ..... Redlands, Cal.  
 Snell, Effie (Clark) ..... Teacher, Yutan, Neb.  
 Whitten, John C. .... Prof. of Hort., U. of Missouri, Columbia  
 Winegar, Albert J. .... Life Insurance, 854 Bluff St., Beloit, Wis.

### Class of 1893.

#### MASTER OF SCIENCE.

Griffiths, David, Asst. Agrostologist .....  
 .....Dept. of Agriculture, Tacoma Park, Washington, D. C.

#### BACHELOR OF SCIENCE.

Bates, Edmund T. .... Farmer, Wyoming, Iowa  
 Beck, Milton ..... Engineer, Lansing, Mich.  
 Edgerton, Wm. M. .... Physician, Faulkton  
 McLouth, Benjamin F., Ins. Agent .....  
 .....L. A. Investment Bldg., Los Angeles, Cal.  
 Robertson, Ada N. .... Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec.  
 .....for China, 120 Szechuen Road, Shanghai, China  
 Schoppe, W. J. A. .... Farmer, Groton

### Class of 1894.

#### MASTER OF SCIENCE.

Plocker, Eva (Mathews) ..... Brookings  
 Wolgemuth, Lee E. .... Real Estate, Hamilton, Mont.

**BACHELOR OF SCIENCE.**

Brown, Cyrus O. ....Attorney, Douglas, Wyo.  
 Brown, James A. ....Attorney, 522 Burr Block, Lincoln, Neb.  
 Dibble, Hattie (Stow) ....Castlewood  
 Hopkins, Mrs. C. G. ....1001 S. Wright St., Champaign, Ill.  
 Luke, Fred K. ....Farmer, R. F. D. No. 2, Kalispell, Mont.  
 Parker, Fannie (Spooner) ....Brookings  
 Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.  
 Tanzy, Marvin F. ....Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D. ....Real Estate, Greenfield, Ind.  
 Williams, Elinor (Knox) ....Saccaton, Arizona  
 Young, Gilbert A., Prof. of Mech. Eng., Purdue Univ. ....  
 .....739 Owen St., Lafayette, Ind.

**Class of 1895.****MASTER OF SCIENCE.**

McKenney, Duston W., Supervisor Manual Training .....  
 .....302 Lewis Ave., Billings, Mont.  
 Schoppe, W. J. A. ....Farmer, Groton  
 Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.

**BACHELOR OF SCIENCE.**

Allison, Wm. F., Prof. of Civil Eng., U. of Wash., Seattle, Wash.  
 Brown, Sarah .....Teacher, Shannon City, Iowa  
 Cornell, Harry M. ....Real Estate 1 Stratford, Fargo, N. D.  
 Mayland, Mable (Merrick) ....Troy, Kan.  
 Parker, Anna (Moore) ....Brookings  
 Salisbury, Edith (Robertson) ....120 Szechuen Road, China  
 Sevy, Isaac B. ....Teacher, Freewater, Oregon  
 Sproul, Wm. T., Gen. Mgr., Ingersoll Milling Machine Co. ....  
 .....Rockford, Illinois  
 Thornber, John J. ....Prof. of Botany, U of Arizona, Tucson  
 Wilcox, Ernest N. ....Farmer, Thawville, Ill.

**PHARMACY GRADUATES.**

Briggs, Elmer E. ....Farmer, Muscoda, Wis.  
 Knox, Wm. H. ....With U. S. Dept. of Agr., Saccaton, Arizona  
 Lentz, Elmer A. ....Dentist, Brookings  
 Murphy Wm. ....Died July 5, 1896, at Brookings  
 Whitehead, B. T. ....Prof. Pharmacy, S. D. S. C.

**Class of 1896.****MASTER OF SCIENCE.**

Brown, James A. ....Attorney, 522 Burr Block, Lincoln, Neb.  
 Luke, Fred K. ....Farmer, R. F. D. No. 2, Kalispell, Mont.  
 Robertson, Ada N. ....Teacher, R. F. D. No. 225, Anaheim, Cal.

Snell, Effie (Clark) .....Teacher, Yutan, Neb.  
 Wilcox, Ernest N. ....Farmer, Thawville, Ill.

### BACHELOR OF SCIENCE.

Atkinson, Jesse C. ....Farmer, Allegan, Mich.  
 Carter, Louis W. ....Register of Deeds, Highmore  
 Dibble, Ida (Brown) .....522 Burr Block, Lincoln, Neb.  
 Downing, Jennie C. ....Tel. Mgr., Rathdrum, Idaho  
 Grattan, Paul H. ....Hardware Merchant, Jackson, Minn.  
 Hegeman, Harry A., Captain, 19th Infantry, U. S. A. ....  
 .....Vancouver Barracks, Ore.  
 Holm, Andrew B. ....Accountant, Pierre  
 Hoy, Howard H. ..Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.  
 Korstad, Mary .....Brookings  
 Lusk, Willard C. ....Editor Yankton Press and Dakotan, Yankton  
 Mathews, Alta (Smith) .....Rio Dell, Cal.  
 Mathews, Nora (Hoy) .....Brookings  
 Sasse, Ernest G. ....Physician, Lidgerwood, N. D.  
 Williamson, Albert .....Attorney, Kennebec

### PHARMACY GRADUATES.

Cotter, J. C. ....Merchant, Dell Rapids  
 Grove, Eugene .....Physician, Hetland, S. D.  
 Moore, Thomas .....Druggist, Waterloo, Ia.  
 Palmer, Horton ....Druggist, 426 S. Sycamore St., Santa Ana, Cal.  
 Sherwin, Frank .....Merchant, Willamina, Ore.

### Class of 1897.

### MASTER OF SCIENCE.

Davis Homer .....Physician, Genoa, Neb.

### BACHELOR OF SCIENCE.

Ainsworth, Cephas B. ....Land, 406 Idaho St., Lewiston, Mont.  
 Atkinson, George...Map Publisher, Ceylon, Saskatchewan, Canada  
 Atkinson, Walter., Civil Engineering, 632 W. 67th St., Chicago, Ill.  
 Boyden, Frank E. ....Physician and Surgeon, Pendleton, Ore.  
 Clevenger, John W. ....Dentist, Chamberlain  
 Hargis, Christie (Saylor) ....1019 6th Ave., E. Des Moines, Iowa  
 Hazle, Wm. A. ....Lawyer, 208 6th Ave., S. E., Aberdeen  
 Husted, Harley H. ....Died Jan. 14th, 1907, at Lincoln, Neb.  
 Jolley, Wm. G. ....Teacher, 5032 6th St., S. E., Portland, Ore.  
 Madden, Cassie (Crowley) ....625 9th St., S., Minneapolis, Minn.  
 Olson, Eva .....Teacher, South St. Paul, Minn.  
 Parsons, Thos. S. ....Prof. of Agro., U. of Wyo., Laramie, Wyo.  
 Roe, Robert .....Stockman, Highmore  
 Shuster, John W...Asso. Prof. Elec. Eng., U. of Wisconsin, Madison

Thornber, Walter S., Pres. Lewiston-Clarkson School of Hort.

..... Lewiston, Idaho  
 Walters, Wm. H. .... Grain Buyer, Bruce  
 West, Orpha (Sevy) ..... Freewater, Ore.  
 Whaley, Neva (Harding) ..... Brookings  
 Whitehead, Bower T. .... Prof. of Pharmacy, S. D. S. C.  
 Wilcox, Alice (Remsburg) ..... Thawville, Ill.  
 Work, Lloyd E. .... Bond Salesman, 10 S. La Salle St., Chicago, Ill.  
 Young, Grace (Bullen) ..... 260 Jessup St., Portland, Ore.

#### Class of 1898.

#### MASTER OF SCIENCE.

Chilcott, E. C., Agronomist in charge of Dry Land Agriculture,  
 ..... Washington, D. C.  
 Harkins, Lilla A., Prof. Domestic Science .....  
 ..... Montana Agri. College, Bozeman, Mont.  
 Parsons, Thos. S. .... Prof. of Agro., U. of Wyo., Laramie, Wyo.

#### BACHELOR OF SCIENCE.

Ainsworth, Howard, Fruit Grower .....  
 ..... R. F. D., No. 17, Mountain View, Cal.  
 Ainsworth, Flora (Hazle) ..... 208 6th Ave., S. E., Aberdeen  
 Barton, Alice (White) ..... 2548 C. St., Santa Ana, Cal.  
 Beck, Louis ..... Engineer "Ana Dean Farm," Barberton, O.  
 Bolles, Myrick N. .... Mill Manager, 413 Wall St., Joplin, Mo.  
 Curtiss, Elsie (Crane) ..... Kettle Falls, Wash.  
 Davidson, Margaret (Crane) .. 1818 E. Liberty St., Spokane, Wash.  
 Fjerestad, Hans C. .... Loans, Sioux Falls  
 Harding, Charles J. .... Teacher, Mankato, Minn.  
 Hegeman, Maude (Boyden) ..... Pendleton, Ore.  
 Hegeman, Mabel (Allison) ..... Univ. of Wash., Seattle, Wash.  
 Hodgeson, Herbert H., Top. Eng., U. S. Geol. Survey, Wash., D. C.  
 Knox, Wm. H. .... With U. S. Dept. of Agr., Saccaton, Arizona  
 Lawrence, Claude W. .... Farmer, Sequim, Wash.  
 Lawrence, Clay ..... Lawyer, Pioneer Bldg., Seattle, Wash.  
 Loveland, Addie (Towne) .. 2104 Penn. Ave. S., Minneapolis, Minn.  
 Paddock, Jay M. .... Traveling Salesman, Eugene, Ore.  
 Riemann, Edith (Adams) .. 34 Rue de Comines, Bruxelles, Belgium  
 Thornber, Wm. T. .... Farmer, Colman  
 Towne, Judson, Teacher Physics, E. Side H. S. ....  
 ..... 2104 Penn. Ave. S., Minneapolis, Minn.

#### PHARMACY GRADUATES.

Beebe, Jay L. .... Physician and Surgeon, Anaheim, Cal.  
 Clevenger, J. W. .... Dentist, Chamberlain  
 Holsey, Joseph ..... Druggist, Veblen  
 Lee, Berton E. .... Accountant, 104 S. 4th St., Mankato, Minn.

**Class of 1899.****MASTER OF SCIENCE.**

Dibble, Hattie (Stow) .....Castlewood  
 Mathews, Hubert B. ....Prof. of Physics, S. D. S. C.  
 Thornber, Walter S., Pres. Lewiston-Clarkson School of Hort.  
 ..... Lewiston, Idaho  
 Whitten, John C. ....Prof. of Hort., U. of Missouri, Columbia

**BACHELOR OF SCIENCE.**

Colegrove, Ina (Nelson) .....148 West St., Worcester, Mass.  
 Findeis, Phillip .....Lumber Merchant, Miranda  
 Lawrence, Mary M., Inst. in Domestic Science, State Normal  
 ..... Bellingham, Wash.  
 Lawrence, Wm. H. ....Horticulturist, U of Arizona, Tucson  
 Mason, Nellie (Mason) .....Albia, Ia.  
 Nachtigal, Isaac .....Farmer, South Shore  
 Sherwin, Howard H., Civil Engineer, 70 N. Y. Ave, Brooklyn, N. Y.  
 Walter, Edith (Fystrom) ....Died May 16, 1910, at Geneseo, N. D.  
 West, George .....Physician, Armstrong, Iowa

**PHARMACY GRADUATES.**

Carr, George .....Druggist, Bison  
 Crowley, D. C. ....Druggist, Portland, Ore.  
 Hepner, Frank .....Asst. Chemist U. of Wyoming, Laramie  
 Kendall, Clinton D. ....Druggist, Brookings  
 Lindsey, Charles .....Farmer, Winfred  
 Oulton, Frank .....Real Estate, Faulkton  
 Shriver, E. M. ....Real Estate, Coos Bay, North Bend, Ore.  
 Taylor, C. DeWitt .....

**Class of 1900.****BACHELOR OF SCIENCE.**

Allen, Hart M. ....Druggist, Woodland, Cal.  
 Anderson, Clark W. ....Died March 6th, 1902, at Brookings  
 Beebe, Jay L. ....Physician and Surgeon, Anaheim, Cal.  
 Carlson, Esther (Lilygreen) ....701 Magnolia St., St. Paul, Minn.  
 Carlson, Ella (Howard) .....Lake Preston  
 Davies, Sara (Sherwin) .....70 N. Y. Ave., Brooklyn, N. Y.  
 Davies, Mary (Hutchins) .....Falls City, Neb.  
 DeLa, John W. ....Editor, Balfour, N. D.  
 Doughty, Matthew H. ....Civil Engineer, Denver, Colo.  
 Grove, Frank W. ....Dentist, Delta, Colo.  
 Harza, Carl .....Electrician, 21 Scovel Place, Detroit, Mich.  
 Kendall, Clinton D. ....Druggist, Brookings  
 Lawrence, Jessie (Hagerman) .....Auburn, Wash.  
 Mathews, Alice (Albright) ....714 20th St. N., Great Falls, Mont.



Mathews, Roscoe A., Lumberman, 1323 6th Ave. N. ....  
 .....Great Falls, Mont.  
 Morrison, Freda (Cole) .....Wenatchee, Wash.  
 Olson, Gustava (Hodgeson) .....Linden, Md.  
 Williams, Callie (Olson) .....116 N. Summit Ave., Sioux Falls

### PHARMACY GRADUATES.

Bentley, Wm. S. ....Physician and Surgeon, Hot Springs  
 Brosseau, Jessie E. ....Physician and Surgeon, Frankfort  
 Baldwin, Corwin B. ....Druggist, Rapid City  
 Connell, John C. ....Druggist, Luverne, Minn.  
 Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Eckhart, Henry .....Died at Menno, S. D.  
 George, William .....Physician and Surgeon, Selby  
 Hart, Bertrand .....Physician and Surgeon, Blunt  
 Jones, Robert .....Druggist, Madison  
 West, Hugh H. ..Physician and Surgeon, Spurling Bldg., Elgin, Ill.

### Class of 1901.

### MASTER OF SCIENCE.

Knox, Wm. H. ....With U. S. Dept. of Agr., Saccaton, Arizona  
 Whitehead, Bower T. ....Prof. of Pharmacy, S. D. S. C.

### BACHELOR OF SCIENCE.

Bagley, Sussana..Teacher, 3012 Ezekiel St., Lake Co., Zion City, Ill.  
 Bolles, Laura Jane .....Teacher, Muskogee, Okla.  
 Brosseau, Jesse E. ....Physician, Frankfort  
 Boyd, Mary (Labbitt) .....410 13th St., Sioux City, Ia.  
 Cranston, Margaret (Young) ..Died June 7th, 1907, at Oakes, N. D.  
 Culhane, Michael E. ....Culhane Adjustment Co., Brookings  
 Davies, Autumn, Instructor in History, H. S. ....  
 .....Mason Apartments, Omaha, Neb.  
 Dodge, Fred E. ....Hotel Mgr., Redfield  
 Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Enos, Winifred .....Librarian, Brookings  
 Erickson, Martin L. ....Forestry Service, Medford, Ore.  
 Evans, Lina (Roskie) .....Custer  
 Fishback, Myra (Kennedy) .....86 College St., Calcutta, India  
 Harza, LeRoy F. ....Civil Eng., Portland, Ore.  
 Hatton, John H. ....Forestry Service, Denver, Colo.  
 Johnson, Rhoda (Lee) .....Died Oct. 18, 1909, Denver, Colo.  
 Kendall, Leonard J. ....Telegraph Operator, Brookings  
 Kennedy, C. Leroy .....  
 .....Fruit Raiser, R. F. D. No. 18, Mountain View, Cal.  
 Langdon, Lillian (Culhane) .....Brookings

McElmurry, Loretta, Instructor Domestic Science, State Normal	
.....	Madison
Mork, Theodore	Farmer, Des Lacs, N. D.
Phillips, Florence (Haas)	Arlington
Phillips, C. Louise	Librarian, U. S. Dept. Ag., Washington, D. C.

### PHARMACY GRADUATES.

Cornell, Edward, Pharmacist	
.....	1824 Lyndale Ave., S., Minneapolis, Minn.
Tidball, Clyde	Druggist, Brookings

### Class of 1902.

### BACHELOR OF SCIENCE.

Fleming, Michael	
....	With M. A. Hanna Coal Co., Pioneer Bldg., St. Paul, Minn.
George, William A.	Physician and Surgeon, Selby
Hart, Bertrand M.	Physician and Surgeon, Blunt
Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie	
Johnson, Clara (Johnson)	Brookings
Johnson, Edward	Died May 1, 1907, Tacoma, Wash.
Kephart, George	Lawyer, Iowa Building, Sioux City, Ia.
Lee, Berton E.	Accountant, 104 S. 4th St., Mankato, Minn.
Ramsey, Henry J., Expert in Fruit Storage, Bureau Plant In-	
dustry, 309 Argyle Apartments	Washington, D. C.
Roskie, Geo.	Forester, Custer
Thornber, Edith (Cuckow)	La Junta, Colo.
Trooien, Ole N.	Contractor, Brookings
Winegar, Laura	Nurse, Brookings

### PHARMACY GRADUATES.

Allison, Wm. F., Prof. of Civil Eng., U. of Washington	
.....	Seattle, Wash.
Boyden, Frank E.	Physician and Surgeon, Pendleton, Ore.
Christianson, Bernett	Druggist, Wessington Springs
Hayter, McPherson	Druggist, Artesian
Jarrett, Arthur A.	Druggist, Colman
Jarvis, S. Hall	Druggist, Faulkton
Leighty, James A.	Druggist, Winfred
Morton, Frederic M.	Druggist, Lake City
Pickles, Chester E.	Farmer, Elrod
Schnaidt, Henry	Druggist, Parkston
Schroeder, Anna (Gassman)	Howard
Thomas, John C.	Druggist, Marion

**Class of 1903.****MASTER OF SCIENCE.**

- Crane, Austin B., Prof. of Math. and Civ. Eng., Spokane Univ.  
 ..... Spokane, Wash.  
 Hoy, Howard H. .... Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.

**BACHELOR OF SCIENCE.**

- Almond, Fred C. .... Died March 12th, 1909, at Clear Lake  
 Cole, John S., Examiner of Dry Land Agr. Exp. Stations, Dept.  
 of Agr. .... 989 So. Penn. Ave., Denver, Colo.  
 Colegrove, Lettie (Drew) .... Farmington, Minn.  
 Cuckow, Fred W. .... Lawyer, La Junta, Colo.  
 Hubbart, Minnie (Holbein) .... Lansford, N. D.  
 Johnson, Isaac .... Lumberman, Brookings  
 Kendall, Krete (Miller) .... Brookings  
 Langdon, Alice .... Stenographer, Brookings  
 Miller, Shirley P. .... Professor Zoology, S. D. S. C.  
 Norton, Frank A. .... Fruit Grower, Grand View, Wash.  
 Otterness, Jens M., Private Secretary to Senator Sterling .....  
 ..... 441 Senate Office Bldg., Washington, D. C.  
 Peirce, E. Esther .... Teacher, 524 E. Kemp St., Watertown  
 Sanborn, Ethel I., Instructor Univ. of Oregon .....  
 ..... 670 12th Ave., E., Eugene, Ore.  
 Sarvis, Roscoe J., Elec. Eng., 1319 7th St., S. E., Minneapolis, Minn.  
 Seide, Louise (Prell) .... Calamus, Iowa  
 Webster, James L. .... Farmer, Wenatchee, Wash.  
 Westcott, Geo. R., Asst. Engr., Mo. Pac. Ry. ....  
 ..... 5764 Goodfellow Ave., St. Louis, Mo.

**PHARMACY GRADUATES.**

- Drew, Arthur W. .... Physician and Surgeon, Farmington, Minn.  
 Hall, Roy J. .... Druggist, Oldham  
 Heston, Edward C. .... Physician and Surgeon, Roslyn, Wash.  
 Hollister, Arthur R. .... Traveling Salesman, Madison  
 Howell, John E., Chemist, S. P. R R. ....  
 ..... 402 Hathaway Ave., Houston, Texas  
 Johnston, Samuel .... Druggist, Hazel  
 Norton, Frank A. .... Fruit Grower, Grand View, Wash.  
 Steiner, Frederick W., Physician .....  
 ..... 323 Union Ave., Havre de Grace, Md.  
 Trumm, Robert E. .... Druggist, Hayti  
 Van Dusen, Fred J. .... Lead  
 Williams, Percy, Physician and Surgeon .....  
 ..... 557 Spring St., Los Angeles, Cal.  
 Young, Alfred J. .... Farmer, Adanac, Saskatchewan

**Class of 1904.****MASTER OF SCIENCE.**

Trooien, Ole N. .... Contractor, Brookings

**BACHELOR OF SCIENCE.**

Binford, Wm. W. .... Lumberman, Greenleaf, Idaho  
 Bushnell, Maude (Kelton) .... Henry  
 Loucks, Anna Y. (Brown) .... Brookings  
 Mattice, Albert F. .... Oculist, 1017 Cobb Bldg., Seattle, Wash.  
 McGarry, Lawrence R. .... Merchant, Mansfield  
 Ruth, Thomas H. .... Veterinary Surgeon, De Smet  
 Sanderson, Everett G. .... Farmer, Aurora  
 Sherwin, Ralph L. .... Civil Engineer, Bay Harbor, Fla.  
 Smith, Wm. H. .... Missionary, Damaguete, P. I.  
 Thompson, Clarence .... Farmer, Dell Rapids  
 Walter, L. Erving .... Conde

**PHARMACY GRADUATES.**

Anderson, Ernest .... Druggist, South Shore  
 Dillon, Cornelius .... Druggist, Hotel Smede Bldg., Eugene, Ore.  
 Frick, Harry E. .... Merchant, Mitchell  
 Goodale, Alton R. .... Druggist, Angeles Pharm., Los Angeles, Cal.  
 Hooker, Henry .... Physician, Danville, Ill.  
 Koch, Arthur E. .... Attorney, 621 Ford Bldg., Detroit, Mich.  
 Ramsdell, Leonard C., Druggist .....  
 .... With Murgittroyd's Drug Co., Spokane, Wash.  
 Thompson, Gottfried .... Physician and Surgeon, Sioux Falls  
 Weisflock, Theodore .... Druggist, Frankfort

**Class of 1905.****MASTER OF SCIENCE.**

Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie  
 Norton, Frank A. .... Fruit Grower, Grand View, Wash.  
 Phillips, C. Louise, Librarian, Bureau of Plant Industry, Grain  
 Standardization .... Washington, D. C.  
 Thompson, Clarence .... Farmer, Dell Rapids  
 Walter, L. Erving .... Conde

**BACHELOR OF SCIENCE.**

Boyden, Guy L. .... Physician and Surgeon, Pendleton, Ore.  
 Chappell, Bessie .... Teacher, Lamar, Colo.  
 Chappell, Elsie (Wilson) .... Brookings  
 Davis, Clifford W. .... Farmer, 2337 Grant St., Berkeley, Cal.  
 Elliott, Roy K. .... Electrician, 20 Bay State Ave., Somerville, Mass.  
 Fassett, Della (Loucks) .... Watertown  
 Fishback, Van Dusen .... Asst. Cashier, Brookings

- Forrest, Victor E., Contractor, 224 Boston Blk., Minneapolis, Minn.  
 Fulkerson, Vincent .....Special Agent, Dept. of Agr., Fallon, Nev.  
 Grove, Mary (Potter) .....333 W. Grand Ave., Springfield, O.  
 Hage, Christian F. ....Druggist, Toronto  
 Howg, Edwin M. ....Physician and Surgeon, New Effington  
 Jensen, Lewis N., Special Agent U. S. Dept. Agr., Amarillo, Texas  
 Johnson, Carl L...Electrician, 805 Lincoln Ave., Schenectady, N. Y.  
 Mathews, Harry E. ....Supt. Forest Reserve, Las Vegas, Nevada  
 Miller, Ralph L. ....Lumberman, Melville, N. D.  
 Murphy, Matt W. ....Lawyer, 408 8th Ave. S., Fargo, N. D.  
 Nelson, John Harland, Prof. Structural Eng., Polytechnic Insti-  
 tute, 148 West St. ....Worcester, Mass.  
 Ronning, Oscar E. ....Rural Mail Carrier, Hayti  
 Schaphorst, Wm. F., Technical Advertising, Woolworth Bldg.  
 .....New York City  
 Seeger, Adolph M. ....Elec. Engineer, Y. M. C. A. Bldg., Toledo, O.  
 Slocum, Ina S. (Deeley) ...2818 Granville St. S., Vancouver, B. C.  
 Thogerson, Arthur A. ....Contractor, 437 C. of C., Portland, Ore.  
 Walters, Daisy .....Teacher, Bruce  
 Williams, Harry, Real Estate .....  
 .....L. A. Investment Bldg., Los Angeles, Cal.  
 Williams, Percy, Physician and Surgeon .....  
 .....557 S. Spring St., Los Angeles, Cal.

### PHARMACY GRADUATES.

- Fjerestad, Carl .....Druggist, Elkton  
 Howg, Edwin M. ....Physician and Surgeon, New Effington  
 Larson, Lars P. ....Teacher, Howard  
 Mathews, Harry E. ....Supt. Forest Reserve, Las Vegas, Nev.  
 McCurdy, Walter .....Druggist, Lane  
 Morton, Grant J., Federal Drug Ins., Custom House, Portland, Ore.  
 Pottinger, Geo. ....Druggist, Valley Springs  
 Thompson, Clarence .....Farmer, Dell Rapids  
 Volin, Porter .....Physician, Lennox

### Class of 1906.

### BACHELOR OF SCIENCE.

- Aldrich, G. Malcolm, Prin. Calhoun Schools .....  
 .....R. F. D. No. 2, Hopkins, Minn.  
 Barrett, J. Wylie .....Electrical Engineer, Plankinton  
 Bonesteel, Bee (Dillman) .....Newell  
 Brownell, Ellen (Wellington) .....6326 Ripton, Los Angeles, Cal.  
 Burghardt, Roy D. ....Electrician, 89 Marion St., Seattle, Wash.  
 Carpenter, Abbie J., Domestic Science Teacher .....  
 .....524½ Broadway, Seattle, Wash.



Chilcott, Ellery F. ....	Supt. Ex. Station, Woodward, Okla.
Coller, Fred A., Physician and Surgeon .....	
.....	658 W. Jefferson St., Los Angeles, Cal.
Davies, Gladys (Grace) .....	Akron, Colo.
Erstad, Alfred J., Electrician, Care Standard Machinery Co....	
.....	Portland, Ore.
Evans, Edna V., Domestic Science Teacher .....	
.....	College of Montana, Deer Lodge, Montana
Grace, Oliver .....	Supt. Sub Station, Akron, Colo.
Kennard, Frank L., Agronomy .....	
.....	State School of Agr., Crookston, Minn.
Knox, Arthur H. ....	Farmer, Alpena
Koch, Arthur E. ....	Lawyer, 621 Ford Bldg., Detroit, Mich.
Moffatt, Margaret E. ....	Teacher, Brookings
Reich, Rose M. ....	Teacher, Adams, Wis.
Thorner, Jessie B. ....	La Junta, Colo.
Youngberg, Guy E. ....	Asst. in Chem., S. D. S. C.
Allison, Harold .....	Physician and Surgeon, Heppner, Ore.
Bergeim, Olaf, Asst. in Chem., Jefferson Med. Col., Philadelphia, Pa.	
Davis, Gladys (Grace) .....	Akron, Colo.
Harben, Bartlett L. ....	Died June 10, 1912, at Winner, S. D.
Holm, A. B. ....	Accountant, Pierre
Locke, Chas. ....	Pharmacist, Brookings
Wipf, Michael J. ....	Druggist, Alsen, N. D.

#### Class of 1907.

#### MASTER OF SCIENCE.

Culhane, Michael E. ....	Of Culhane Adjustment Co., Brookings
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#### BACHELOR OF SCIENCE.

Binnewies, Mabel E. ....	Teacher, Brookings
Briggs, Stephen F., of Briggs & Stratton Co. ....	
.....	258 Milwaukee St., Milwaukee, Wis.
Burch, Walter S. ....	Elec. Engr., Box 653, Rochester, N. Y.
Christianson, Christine, Teacher .....	
.....	305 S. 6th St., North Yakima, Wash.
Dillman, Arthur C. ....	Special Agent, Dept. of Agr., Newell
Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College....	
.....	706 N. 12th St., Corvallis, Ore.
Elliott, Bruce A. ....	Manual Training Teacher, Hibbing, Minn.
Elliott, Ross W. ....	Manual Training Teacher, Hibbing Minn.
Fjerestad, Alman .....	Electrical Engineer, Estelline
Gagel, Gerald .....	Electrician, Rialto, Cal.
Hofstetter, Geo., Instructor Manual Training, Govt. School....	
.....	Box 487, Manila, P. I.

Kirk, John R. ....	Farmer, Springfield
Johnson, Aaron G., Plant Pathologist, U. of Wis. ....	
.....	132 Lothrop St., Madison, Wis.
Knutson, Mabel (Trooien) ....	Teacher, S. D. S. C.
McCordic, Clare, Machine Expert, Moose Jaw, Saskatchewan, Canada	
McElmurry, Rilla (Eels) ....	Youngstown, Ohio
Morton, Grant J., Fed. Drug. Ins., Customs House, Portland, Ore.	
Reich, J. Carl. Western Elec. Co., 1700 Jackson Blvd., Chicago, Ill.	
Salmon, Cecil, Agronomist Kansas Agr. College ....	
.....	1630 Leavenworth, Manhattan
Sanderson, Eugene, Electrician ....	
.....	56 Woodward Ave., S. Norwalk, Conn.
Tuttle, Volney J., General Electric Co., D. C., Eng. Dept. ....	
.....	Schenectady, N. Y.
Underwood, Genevieve ....	Teacher, Watertown
Westcott, Ruth M. (Johnson) ....	132 Lothrop, Madison, Wis.
Work, Mary I. ....	Stenographer, 3850 Indiana Ave., Chicago

### PHARMACY GRADUATES.

Dexter, David F. ....	Druggist, Canton
Roney, Ray W. ....	Druggist, Chester
Ennis, Herbert I. ....	Druggist, Volga
Kartrude, Inga M. ....	Teacher, Hardwick, Minn.

### Class of 1908.

### MASTER OF SCIENCE.

Coller, Fred A., Physician and Surgeon ....	
.....	658 W. Jefferson St., Los Angeles, Cal.
Koch, Arthur E. ....	Lawyer, 621 Ford Bldg., Detroit, Mich.

### ELECTRICAL ENGINEER.

Elliott, Ross W. ....	Manual Training, Hibbing, Minn.
-----------------------	---------------------------------

### BACHELOR OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon ....	
.....	St. Johns, Newfoundland
Bergeim, Olaf, Asst. in Chemistry, Jefferson Med. Col. ....	
.....	Philadelphia, Penn.
Carpenter, Clarence A. ....	Electrical Engineer, Rapid City
Chilcott, Ralph ....	Farmer, Vienna, Va.
Cooley, William R. ....	Stockman, Springfield
Griffith, T. Edwin ....	Farmer, Timmer, N. D.
Holsey, Ernest ....	Elec. Eng., Y. M. C. A. Bldg., Spokane, Wash.
Hubbart, Edith J. ....	Asst. Librarian, S. D. S. C.
Hyde, Hallie W. ....	Inst. Dom. Sc., U. of Idaho, Moscow
Kelly, Amy ....	Inst. Dom. Sc., U. of Idaho, Boise

Kendall, Nellie G. ....Instructor in English, S. D. S. C.  
 Locke, Francis J., Elec. Eng., 513 Summer St., West Lynn, Mass.  
 Mathews, Oscar R. ....Expert, Dry Land Agr., Newell  
 Mayland, Amy ....Died Feb. 17, 1909, at Lincoln, Neb.  
 Mayland, George R. ....P. G. Student, S. D. S. C.  
 Nelson, Aaron L. ....Electrician, 511 E. Ave., Erie, Pa.  
 Nilsson, Edward, Artist, Capital Engraving Co. ....  
 ....219 W. Edwards St., Springfield, Ill.  
 Olberg, Fred C. ....Druggist, Ballard, Wash.  
 Perry, William J. ....Elec. Eng., Corozol, Canal Zone  
 Soreng, Edward M., Electrician, with Briggs-Stratton Co. ....  
 ....198 15th St., Milwaukee, Wis.  
 Sperb, John J. ....Civil Eng., 301 Wheeler St., Portland, Ore.  
 Ulrich, Darwin William, Electrical Engineer ....  
 ....2605 Cal. Ave., Seattle, Wash.  
 Underwood, Beatrice ....Watertown  
 Underwood, Loto (White), Brooklyn Botanical Gardens ....  
 ....Brooklyn, N. Y.  
 Weeks, Gordon A., Electrical Engineer ....  
 ....711 Post St., Hotel Robbins, San Francisco, Cal.  
 West, Florence E. ....Hill Top Farm, Rhinebeck, N. Y.  
 Whitehead, Lindsey W. ....Civil Eng., Boston, Mass.  
 Williams, Ruby ....Teacher, 557 S. Spring St., Los Angeles, Cal.

#### PHARMACY GRADUATES.

Murphy, James P. ....Druggist, Rapid City  
 Hoch, Joseph L. ....Druggist, Scotland  
 Olberg, Fred C. ....Druggist, Ballard, Wash.  
 Quiggle, Ernest J. ....Pharmacist, Groton

#### Class of 1909.

#### MASTER OF SCIENCE.

Mathews, Oscar R. ....Expert, Dry Land Agr., Newell

#### ELECTRICAL ENGINEER.

Elliott, Bruce ....Manual Training Teacher, Hibbing, Minn.

#### MECHANICAL ENGINEER.

Schaphorst, Wm., Technical Advertising ....  
 ....Woolworth Building, New York City

#### BACHELOR OF SCIENCE.

Bacon, Eva (Paulson) ....Castlewood  
 Bushnell, Edna ....Teacher, Touchet, Wash.  
 Camp, Fred ....Farmer, Winfred, Mont.  
 Catlett, Winifred ....Brookings  
 Champlin, Manley ....Asst. in Agronomy, S. D. S. C.

Clarke, Roy .....	Student, U. of C., Chicago, Ill.
Coughlin, Chas., Supt. Construction, Briggs-Stratton Co. ....	
.....	258 Milwaukee St., Milwaukee, Wis.
Denhart, Cecil .....	Grain Dealer, White
Erwin, Ada .....	Inst. Dom. Sc., State Normal, Stevens Point, Wis.
Evans, Iva (Morrison) .....	Redfield
Furnstahl, John .....	Civil Engineer, Ajo, Ariz.
Jensen, Harvey .....	Insurance, Fargo, N. D.
Jones, Robert .....	Lawyer, Milbank
Kremer, Alvin .....	Bookkeeper, U. S. Nat'l Bank, Portland, Ore.
Lane, Lloyd .....	Farmer, Beresford
McKeown, Ralph .....	Farmer, Sentinel Butte, N. D.
Marquis, Sidney, Electrical Engineer .....	
.....	590 68th Ave., West Allis, Milwaukee, Wis.
Matheny, Chester, Elec. Eng., Gen. Elec. Co. ....	
.....	Monadnock Bldg., Chicago, Ill.
Odland, John .....	Farmer, Sentinel Butte, N. D.
Palm, Ellen (Olson) .....	Norden
Peirce, Ruth .....	Music Teacher, Brookings
Phillips, Geo. ....	Y. M. C. A. Sec., S. D. S. C., Brookings
Sarvis, Johnson.....	Special Agent, Dept. of Agr., Mandan, N. D.
Sperb, Frank .....	Civil Engr., 301 Wheeler St., Portland, Ore.
Swering, Joe .....	Electrical Engineer, Brookings
Treacy, Timothy, Theological Student .....	
.....	487 Mich. Ave. N. E., Washington, D. C.
Vernlund, Carl, Physician and Surgeon .....	
.....	Hartford Hospital, Hartford, Conn.
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.	
Wickre, Jacob .....	Farmer, Langford
Wright, Mary (Dutcher) .....	706 N. 12th St., Corvallis, Ore.

### PHARMACY GRADUATES.

Abbott, Guy S. ....	Druggist, Yale
Buck, Ervin .....	Druggist, Wessington Springs
Crosby, LeRoy .....	Pharmacist, Hitchcock
Dickey, James .....	Druggist, Iroquois
Hage, Christian .....	Druggist, Toronto
Wilson, Frank M. ....	Druggist, Harlem, Mont.
Youngberg, Guy E. ....	Asst. in Chem., S. D. S. C.

### Class of 1910.

### MASTER OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon .....	
.....	St. Johns, Newfoundland

Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College. . . .  
 . . . . . 706 N. 12th St., Corvallis, Ore.  
 Youngberg, Guy E. . . . . Asst. in Chem., S. D. S. C.

### MECHANICAL ENGINEER.

Hofstetter, George, Inst. in Manual Training . . . . .  
 . . . . . Govt. School, Box 487, Manila, P. I.

### BACHELOR OF SCIENCE.

Atkinson, Fay . . . . . Farmer, White  
 Barber, Floyd . . . . . Civil Engineer, Rogers Bldg., Vancouver, B. C.  
 Biggar, Howard H. . . . . U. S. Dept. of Agr., Washington, D. C.  
 Crothers, Harold, Inst. in Elec. Eng., U. of Wisconsin . . . . .  
 . . . . . 740 Langdon St., Madison, Wis.  
 Crothers, Ralph . . . . . Farmer, Badger  
 Fickle, Walter . . . . . Died Jan. 26, 1911, at Blunt  
 Fridley, Ray . . . . . Manager Fridley's Garage, Brookings  
 Grotta, Edwin . . . . . Implement Dealer, Esmond  
 Johnson, Charles . . . . . Hardware Merchant, Hetland  
 Johnson, Milla (Anderson) . . . . . New England, N. D.  
 Kartrude, Inga . . . . . Teacher, Hardwick, Minn.  
 Kelly, T. B. . . . . Music Student, 324 E. 17th St., Minneapolis, Minn.  
 Lothrop, Elmer . . . . . Electrical Engineer, Redfield  
 Lloyd, Robert, Elec. Contr., 1131 Van Nuys Bldg., Los Angeles, Cal.  
 Matheny, Allie (Woolledge) . . . . . Minot, N. D.  
 Matheny, Fred . . . . . Civil Engineer, 1731 13th Ave., Seattle, Wash.  
 Morrison, Joseph . . . . . Agr. Expert, Ex. Sub Station, Highmore  
 Nagel, Herman . . . . . Student, 1444 Bever Ave., Cedar Rapids, Iowa  
 Ort, A. A., Civil Engineer, 601 Western Union Bldg., Chicago, Ill.  
 Palm, Andrew . . . . . County Agricultural Agent, Watertown  
 Sexauer, Elmer . . . . . Grain, Brookings  
 Sheldon, Nettie (Atkinson) . . . . . White  
 Wahl, Walker W. . . . . Farmer, Cartersville, Mont.  
 Welch, Cecile . . . . . Asst. in Music, S. D. S. C.  
 Wohlheter, Verne . . . . . Attorney, White  
 Yocom, Frank . . . . . Inst. in Manual Training, Holtville, Cal.

### PHARMACY GRADUATES.

Brown, Geo. B. . . . . Pharmacist, Clark  
 Goldthrop, George . . . . . Druggist, Conde  
 Morrison, Joseph . . . . . Agricultural Expert, Sub Station, Highmore  
 Williams, Arthur . . . . . Pharmacist, Sturgis



**Class of 1911.****MASTER OF SCIENCE.**

Sarvis, Johnson.....Special Agent, Dept. of Agr., Mandan, N. D.  
 White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.

**BACHELOR OF SCIENCE.**

Balmat, John .....Civil Engineer, 2614 Agnes, Kansas City, Mo.  
 Catlett, Marguerite .....Brookings  
 Cooledge, Leslie ....Instructor, Mich. Agr. College, Lansing, Mich.  
 Cottingham, Jay .....Lumberman, Sioux City, Iowa  
 Erwin, Ruth (Bibby) .....State College, Pa.  
 Finley, Vollmar .....Inst. in Agr., Redwood Falls, Minn.  
 Fridley, Bess (Fromme) .....Purdue University, Lafayette, Ind.  
 Fridley, Richard .....Died Aug. 23, 1912, at Lake Benton, Minn.  
 Fromme, Fred, Inst. in Botany, Purdue University, Lafayette, Ind.  
 Gropengieser, Fred .....Asst. Bank Cashier, Onida  
 Haas, Carrie (Quinn) .....Arlington  
 Hallen, Harold .....Electrical Engineer, Ord, Neb.  
 Huntmer, Percy .....Inst. in Agr., Melrose, Minn.  
 Jarman, Mabelle .....Brookings  
 Johnson, Clifford .....Died September, 1912, at Huron  
 Knutson, Geneva (Flittie) .....Brookings  
 Ladd, Amy .....Student Physical Culture, Battle Creek, Mich.  
 Mathewson, Lynn, Mech. Engr., 5019 Calumet Ave., 2 Apt., Chicago  
 McMillan, Orville .....Farmer, Alpena  
 Meharg, Max .....Inst. Man. Training, Park City, Utah  
 Mitchell, Harry, Elec. Engr., 2933 Girard Ave. S., Minneapolis, Minn.  
 Odland, Ole M. ....Farmer, Hurley  
 Peterson, Helen .....Teacher, Stockholm  
 Plocker, Florence (Shelden) .....Seneca  
 Quinn, Roy .....Inst. in Agr., Fairfax, Minn.  
 Randall, Frank .....Mech. Engr., Aberdeen  
 Sherwin, Muriel (Stoll) .....Brookings  
 Starring, Cecil, Asst. in Hort., Mont. Agr. College, Bozeman, Mont.  
 Swenehart, John .....Inst. in Agr., Crandon, Wis.  
 Throop, Lotta (Odland) .....Sentinel Butte, N. D.  
 Tinker, Mabel .....Brookings  
 Wilson, R. O. ....Registrar, Mont. Agr. Col., Bozeman, Mont.

**PHARMACY GRADUATES.**

Fellows, Carl .....Druggist, White Lake  
 Martin, Earl S. ....Merchant, Oldham  
 Serles, Earl .....Student, S. D. S. C.  
 Shea, Henry .....Asst. in Chemistry, S. D. S. C.  
 Vis, Heyme .....Pharmacist, Stickney

**Class of 1912.****BACHELOR OF SCIENCE.**

Atwood, Geo. B. ....Veterinarian, Watertown  
 Bibby, Irwin J., Asst in Dairying, Penn. State Col., State College  
 Bisbey, Guy R. ..Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.  
 Daechtler, Fred J. ....Farmer, Sturgis  
 Edson, Ray W. ..With Gen. Elec. Co., 77 Park St., West Lynn, Mass.  
 Erdmann, Henry E. ....P. G. Student, U. of Wis., Madison, Wis.  
 Granger, Paul F., Civil Engineer .....  
 .....1220 13th Ave. W., Calgary, Alberta, Can.  
 Hathaway, Floyd C., Instructor in Agr. ....  
 .....Man. Training School, Ellendale, N. D.  
 Jensen, Russell C. ....Asst. in Dairying, U. of Neb., Lincoln, Neb.  
 Kremer, Henrietta (Furnstahl) .....Ajo, Ariz.  
 Larson, John E. ....Agriculture, Ore. Agr. Col., Corvallis, Ore.  
 Marchant, Guy R. ....Elec. Engr., 323 W. 23rd St., New York City  
 Oakland, Irwin S. ....Manager Seed Co., Sioux Falls  
 Peck, Arthur R., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.  
 Pence, Clay, Elec. Salesman, 313 Penwood Ave., Wilkinsburg, Pa.  
 Reeve, John E., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.  
 Revell, Grace .....Instructor, S. D. S. C.  
 Sauder, William O. ....Forestry, Saguache, Colo.  
 Schaphorst, Ben, Law Student, 1003 E. Huron St., Ann Arbor, Mich.  
 Skinner, Lila, Inst. in Home Economics, U. of Ohio, Columbus, O.  
 Sparks, Henry .....Civil Engineer, Sturgis  
 Stearns, Arthur J. ..Elec. Engr., 16 Hecla Blk., Edmonton, Alberta  
 Welker, Verne E. ....Electrical Engineer, Bagley, Minn.

**PHARMACY GRADUATES.**

Bacon, Harry .....Pharmacist, Hill City  
 Christianson, Helen .....Druggist, Volga  
 Clark, Robt. W. ....Druggist, Sioux Falls  
 Farnham, Beatrice .....Druggist, Waubay  
 Farrar, Vere .....Pharmacist, Langford  
 Grant, Clyde .....Pharmacist, Kasson, Minn.  
 Holstrom, Will .....Pharmacist, Huron  
 Holleman, William .....Pharmacist, Springfield  
 Leavitt, Ethel .....Pharmacist, Milbank  
 Morton, Richard .....Pharmacist, New Effington  
 Serles, Raymond .....Pharmacist, Salem

**Class of 1913.****BACHELOR OF SCIENCE.**

Basgen, Fred .....Structural Engineer, Goodwin  
 Binnewies, Edward R. ....Asst. in Chem., S. D. S. C.

Brigham, Ruth	Brinklow, Md.
Cole, Glenn H.	Agriculture, U. S. Dept. of Agr., Washington, D. C.
Dunn, Everett W.	Civil Engineering, Eldora, Iowa
Engstrom, Carl	Electrical Engineering, Oldham
Faulkner, Hugh	Farmer, Burkmere
Fowlds, Matthew	Asst. in Agronomy, S. D. S. C.
Freiberg, George	Research Fellow, Mo. Bot. Gardens, St. Louis, Mo.
Greenly, Maurice G.	Science Teacher, Honolulu, Hawaii
Gurslee, Chris B.	Inst. in Agr., Detroit, Minn.
Heiser, Agnes K (Yunker)	Hecla
Huyck, Nina B.	Teacher Domestic Science, Wayne, Neb.
King, Stanley	Civil Engineer, Watertown
Kremer, Ralph C.	Inst. in Agriculture, Jordan, Minn.
Landweer, Earl	Electrical Engineer, Hartford
McHugh, Frank James	Farmer, West Point, Miss.
Matheny, Hazel A.	Conde
Morrow, Strayer	Saguache, Colo.
Morrison, Guy E.	Agr. Expert, Redfield
Nilsson, Anna C.	Teacher, Henning, Minn.
Nord, Roy A.	Law Student, 1003 E. Huron St., Ann Arbor, Mich.
Olson, Thos. G.	Elec. Eng., Rebecca St., Wilkinsburg, Pa.
Pier, Clarence L.	Dairy Inspector, Brookings
Rilling, Harry M.	P. G. Student, S. D. S. C.
Sanderson, Harry M.	Farmer, Estelline
Shanley, Clarence	Deputy Dairy Inspector, Brookings
Shea, Henry M.	Asst. in Chem., S. D. S. C.
Shepard, Helen	Teacher, Canova
Sloan, Edith	Inst. Dom. Science, Falls City, Neb.
Somers, Grace	Inst., S. D. S. C.
Sponholz, Lydia (Britzius)	Park Rapids, Minn.
Templeton, Mabel (Johnson)	Hetland
Wood, Ruth A.	Inst. School of Agri., S. D. S. C.

#### PHARMACY GRADUATES.

Eidsmoe, Clark T.	Pharmacist, Arlington
Johnson, Arthur F.	Pharmacist, Springfield, Minn.
Lawler, Frank M.	Pharmacist, Watertown
Null, Ralph L.	Pharmacist, Miller
Simpson, Wm. R.	Pharmacist, Flandreau
Soule, Roy H.	Druggist, Farmer
Tommeraasen, Corne	Pharmacist, Madison
Wornson, Walter A.	Student, S. D. S. C.

#### Class of 1914.

#### BACHELOR OF SCIENCE.

Armstrong, Lillian	Teacher, New London, Iowa
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Armstrong, Inez .....	Teacher, Brookings
Ausman, Leslie V. ....	Inst. in Agriculture, Clark
Britzius, Arno .....	Inst. in Agriculture, Park Rapids, Mich.
Bushey, Alfred .....	P. G. Student, Purdue Univ., Lafayette, Ind.
Casley, Lulu .....	High School Instructor, Bryant
Chappell, Vincent ....	Asst. in Dairying, Iowa State Col., Ames, Iowa
Clifford, Perry .....	Asst. in Dairying, S. D. S. C.
Dulitz, Helen .....	Inst. in Dom. Science, Startup, Wash.
Elliott, Robert .....	Registrar, S. D. S. C.
Gilbertson, Geo. ....	Asst. in Entomology, S. D. S. C.
Gotthold, Roy .....	Music Student, Minneapolis, Minn.
Grinols, Hazel .....	Teacher, Brookings
Gropengieser, Bessie .....	Teacher, Onida
Halladay, Clinton .....	Civil Engineer, Iroquois
Hartgering, Frances .....	Teacher, Hecla
Hegdahl, Paul .....	Farmer, Bruce, Mont.
Heck, Emil... ..	Asst. in Civ. Eng., Purdue Univ., West Lafayette, Ind.
Hofstetter, Clarence .....	Inst. Manual Training, St. Maries, Idaho
Knutson, Charlie O., Electrician with Westinghouse Mfg. Co. .....	Wilkinsburg, Pa.
Legler, Edward V., Instructor Manual Training .....	
.....	State Normal and Industrial School, Ellendale, N. D.
Esther Luebke .....	Inst. Domestic Science, Stevensville, Mont.
Persun, Francis J. E. ....	Inst. in Agr., Atwater, Minn.
Sexauer, Laura .....	Teacher, Brookings
Shepard, Albert D., Asst. in Chem., U. of Illinois, Champaign, Ill.	
Slightam, Kate .....	Inst. in Dom. Science, Monroe, Wis.
Sherwood, Reginald .....	Asst. in Chemistry, S. D. S. C.
Sloan, Sam .....	Asst. in Agronomy, S. D. S. C.
Somers, Ruth .....	Bank Clerk, Brookings
Valentine, Vey .....	Extension Work, Mitchell
White, Henry D. ....	Teacher, Florence
Wilkins, Scott ....	Asst. in Agronomy, Iowa State Col., Ames, Iowa
Wood, Nina .....	Teacher Epworth College, Epworth, Iowa
Wills, Ernest V. ....	Electrician, Brookings

### PHARMACY GRADUATES.

Eng, Julius .....	Pharmacist, Flandreau
Kadinger, Lewis .....	Pharmacist, Vienna
McDougal, Tyrell .....	Pharmacist, Britton
Nelson, Lewis .....	Student, S. D. S. C.
Ray, Winifred .....	Student, S. D. S. C.
Shaw, Albert J. ....	Pharmacist, Miller
Sivertson, Anna .....	Druggist, Pierpont

# Student List

## GRADUATE STUDENTS

Name.	Course.	Home.
Binnewies, Edward .....	G. S. ....	Brookings
Clifford, Perry .....	Agr. ....	Cresbard
Gilbertson, George .....	Agr. ....	Bryant
Rilling, Harry .....	Agr. ....	Brookings
Shea, Henry .....	Py. ....	Brookings
Sherwood, Reginald .....	G. S. ....	De Smet
Sloan, Sam L. ....	Agr. ....	Brookings
Mayland, George .....	Agr. ....	Brookings

## COLLEGIATE STUDENTS

### SENIORS.

Name.	Course.	Home.
Bolland, Jens .....	Agr. ....	Pierpont
Caldwell, Florence .....	H. E. ....	Brookings
Caldwell, Lacey .....	Agr. ....	Brookings
Clarke, Bruce .....	Py. ....	Brookings
Cooley, Hazel .....	H. E. ....	Garretson
Culhane Alexander .....	Agr. ....	Brookings
Culhane, James .....	E. E. ....	Brookings
Drury, Lillian .....	G. S. ....	Chamberlain
Freeman, John .....	Agr. ....	Lead
Gardner Harry .....	Agr. ....	Sturgis
Gilbert, Gladys .....	G. S. ....	Brookings
Graham, William B. ....	Agr. ....	Freeport, Minn.
Hale, Ruth .....	H. E. ....	Carrington, N. D.
Iverson, Carrold .....	Agr. ....	Brookings
Johnson, Carl J. ....	C. E. ....	Brookings
Jones, A. Patti .....	H. E. ....	Whitewood
Keck, Dallas .....	Agr. ....	Brookings
Kremer, Frank .....	G. S. ....	Brookings
Lanphier, Ira .....	C. E. ....	Brookings
Lynch, Arthur .....	Agr. ....	Brookings
Nixon, Jessie .....	H. E. ....	St. Paris, Ohio
Nord, Florence .....	H. E. ....	Brookings
Pilmer, Miller .....	E. E. ....	Brookings
Potter, Ernest C. ....	G. S. ....	Athens, Penn.
Serles, Earl R. ....	Py. ....	Salem
Wornson, Walter .....	Py. ....	Brookings



**JUNIORS.**

Name.	Course.	Home.
Abbott, Cleveland .....	Agr. ....	Watertown
Allison, Arthur .....	E. E. ....	Cavour
Armstrong, Gladys .....	G. S. ....	Brookings
Anderson, Eldon .....	Agr. ....	Pierre
Austin, Ethel .....	H. E. ....	Brookings
Avery, Blanche .....	H. E. ....	Alexandria
Bergeim, Joseph .....	G. S. ....	Brookings
Caldwell, Kate .....	H. E. ....	Brookings
Calkins, Fred .....	E. E. ....	Miller
Dawes, Adelia .....	H. E. ....	Fulton
Dott, Delia .....	H. E. ....	Salem
Drayer, Raymond .....	E. E. ....	Frankfort
Evans, Roy .....	E. E. ....	Brookings
Evers, Clarence .....	M. E. ....	Big Stone
Fish, Warren .....	M. E. ....	Ipswich
Fridley, Harry .....	Agr. ....	Brookings
Fryer, Julia .....	H. E. ....	Doland
Gold, Ralph .....	E. E. ....	Big Stone
Greene, Bernice .....	H. E. ....	Parker
Greeves, Bertha .....	H. E. ....	Miller
Grudem, William .....	M. E. ....	Brookings
Hanten, Matt .....	Agr. ....	Watertown
Heiser, Marie .....	H. E. ....	White
Houghton, Jay .....	C. E. ....	Brookings
Humphrey, Francis .....	E. E. ....	Howard
Jennings, Hollace .....	Agr. ....	Estelline
Jensen, Frank .....	Agr. ....	Mitchell
Jensen, Ross .....	Agr. ....	Fargo, N. D.
Jerlow, Morris .....	Agr. ....	Carthage
Johnston, Ralph .....	Agr. ....	Rapid City
Kennard, George B. ....	Agr. ....	Brookings
Knutson, Robert .....	Agr. ....	Brookings
Lanphier, Eva .....	H. E. ....	Brookings
Laxson, Leroy .....	Agr. ....	Canton
Lynch, Edward .....	Agr. ....	Brookings
Lynch, Ruth .....	H. E. ....	Brookings
Matson, Mamie .....	H. E. ....	Willow Lake
Miller, Harold .....	G. S. ....	Brookings
Myers, George .....	Agr. ....	Redfield
Nelson, Lewis E. ....	Py. ....	Oldham
Peterson, Harold .....	M. E. ....	Sioux Falls
Peterson, Leigh .....	Agr. ....	Watertown
Rishoi, Alfred .....	Agr. ....	White

Rowe, Nellie	H. E.	Sioux Falls
Rowe, Charles S.	Agr.	Sioux Falls
Sheehan, Bernard	Agr.	Aberdeen
Slaatta, Emma	H. E.	Wilmot
Skinner, Cecil	Agr.	Brookings
Slaymaker, Elizabeth	G. S.	Brookings
Sloan, Janet	H. E.	Brookings
Sloan, Lyle	E. E.	Alexandria
Smith, Homer	G. S.	Egan
Waltner, B. P.	Agr.	Freeman
Warner, Harry	Agr.	De Smet
Weber, George	G. S.	Farmer
Wing, Leshar	M. E.	Aladdin, Wyo.

### SOPHOMORES.

Name.	Course.	Home.
Ashbaugh, Virgil	Agr.	Brookings
Abbott, Walter G.	Py.	Tyndall
Ainsworth, Ernest	Agr.	Brookings
Bennett, L. L.	C. E.	Canton
Blakeley, Wesley	Py.	Brookings
Briggs, Cyrus	Agr.	Brookings
Browning, Lenore	G. S.	Brookings
Browning, Ruth	G. S.	Brookings
Chappell, Mabel	H. E.	Brookings
Colliton, Ora	Py.	Brookings
Cook, Orlan P.	E. E.	Clear Lake
Cunningham, Ray	G. S.	Conde
Dakin, Norman	Agr.	Brookings
Emerson, William	C. E.	Castlewood
Fjeld, Erastus	Agr.	Brookings
Giannonatti, Elene	Py.	Brookings
Glennon, Daniel C.	Agr.	Huron
Graber, Elizabeth	H. E.	Freeman
Gregory, Eva	H. E.	Alexandria
Gullick, Blanche	H. E.	Brookings
Haag, Oscar	E. E.	Frankfort
Hanson, Otto W. H.	Agr.	Brookings
Haugen, Ben	Py.	Hartford
Heiser, Elizabeth	H. E.	White
Hill, Joe	Agr.	Mitchell
Holliday, Faye	H. E.	Brookings
Holmes, Walter	Agr.	Brookings
Johnson, Ralph	Agr.	Hetland
Johnson, Myrtle	H. E.	Brookings

Jones, Horace	.....Agr.	.....Mitchell
Karlstad, C. H.	.....Agr.	.....Dempster
Keating, Pearle	.....H. E.	.....De Smet
Kopperud, Harmon	.....Agr.	.....Lake Preston
Langdon, Hazel	.....Py.	.....Clear Lake
Lanphier, Harriet	.....H. E.	.....Brookings
Lawler, Joe	.....C. E.	.....Miller
Lee, Vera	.....H. E.	.....Brookings
Little, David	.....Agr.	.....Wagner
Little Guy	.....Py.	.....Hazel
Lothrop, Orlin	.....E. E.	.....Academy
Loesch, William	.....Py.	.....Oldham
McCoy, Dell	.....C. E.	.....Miller
Malone, Robert S.	.....C. E.	.....Huron
Mathiesen, Homer	.....Agr.	.....Watertown
Miller, H. J.	.....M. E.	.....Hudson
Mills, Oscar	.....Agr.	.....Wall
Nord, Daisy	.....H. E.	.....Brookings
Olson, Edward	.....Py.	.....Alcester
Peterson, Axel	.....Agr.	.....Sioux Falls
Pope, Donald	.....E. E.	.....Estelline
Randall, Harry	.....Py.	.....Arlington
Rasmussen, Claude	.....Agr.	.....Bridgewater
Riddle, Eugene	.....Agr.	.....Waubay
Riis, Jens	.....Agr.	.....Sindberg, Denmark
Robbins, Clarence	.....Agr.	.....Carthage
Rudd, Charles	.....E. E.	.....Orient
Sanson, Freda	.....H. E.	.....Buffalo Gap
Scholten, Wm. K.	.....Agr.	.....Inwood, Ia.
Severson, Florence	.....H. E.	.....Brookings
Shaw, Happy	.....H. E.	.....Madison
Sherwood, Aubrey	.....Agr.	.....De Smet
Skinner, Margaret	.....G. S.	.....Brookings
Smith, Harry	.....C. E.	.....Miller
Soule, Ruth E.	.....H. E.	.....Brookings
Stoddart, Mattie	.....H. E.	.....Brookings
Styer, Clarence	.....E. E.	.....Huron
Stevens, Leo	.....C. E.	.....Sioux City, Ia.
Swenehart, Millie	.....H. E.	.....Brookings
Swift, Eugene	.....Agr.	.....Brookings
Temmey, Kathryn	.....H. E.	.....Onida
Thomas, Cornelius	.....Py.	.....Marion
Thornby, Mary	.....H. E.	.....Deadwood
Tolagson, Clarence	.....Py.	.....Brookings
Wagner, Colman	.....Agr.	.....Selby

Wattson, Donald	Agr.	Chamberlain
Westgate, Louis	Agr.	Adrian, Mich.
Winright, George	Agr.	Alexandria
Wix, Elsie	G. S.	Hetland
Ziegler, Arlene	H. E.	Brookings

## FRESHMEN.

Name.	Course.	Home.
Ahlers, Naomi	H. E.	Webster
Anderson, Adlai E.	Agr.	Mitchell
Anderson, A. Edward	Py.	Watertown
Anderson, Leslie	E. E.	Brookings
Ashbaugh, Alfred	Agr.	Brookings
Aslakson, Carl	M. E.	Erwin
Ayer, Horace	Agr.	Vermillion
Bacon, Grace	H. E.	Brookings
Barrett, Vinal	G. S.	Doon, Ia.
Beals, Edna	H. E.	Brookings
Berglind, Axel	Agr.	Brookings
Blakeman, Elizabeth	G. S.	Columbus, Mont.
Boswell, Mildred	H. E.	Castlewood
Brookens, Clarence	Agr.	Parker
Buck, Ruth	H. E.	Bruce
Bunday, Ray	G. S.	Brookings
Bunt, Agnes	H. E.	Alexandria
Bulger, Jacob	C. E.	White
Burton, Starling A.	Py.	Bowdle
Cabel, Franzella	H. E.	Hudson
Caldwell, Jessie	H. E.	Brookings
Carson, Franklin	M. E.	Cherry Creek
Chenoweth, Orda	Agr.	Wolsey
Coughlin, Thomas	Agr.	Carthage
Dahl, Clarence	Py.	Langford
Dewing, Sara	G. S.	Brookings
Dibble, Robert	G. S.	Beresford
Dokter, John	Agr.	Andover
Drury, Joseph H.	Agr.	Chamberlain
Durfee, Rossiter	Agr.	Huron
Dutt, Earling	C. E.	Beulah, Wyo.
Eberlein, Frank	Agr.	Aurora
Enright, Mary	H. E.	Brookings
Evans, Margaret	H. E.	Brookings
Frease, Hazel	H. E.	Rapid City
Frease, Kathryn	H. E.	Rapid City
Gates, Edgar	Agr.	Rapid City

Gates, Leon F. ....	Agr. ....	Rochester, Minn.
Gaylord, Clair ....	G. S. ....	Brookings
Gilbert, Charles ....	Agr. ....	Clark
Ginsbach, Clark ....	Agr. ....	Hartford
Graber, Ben ....	G. S. ....	Freeman
Greeves, Ida ....	H. E. ....	Miller
Grinols, Mavis ....	H. E. ....	Brookings
Grinols, Violet ....	G. S. ....	Brookings
Guse, Edwin H. ....	Agr. ....	Bryant
Halligan, Marie ....	G. S. ....	Bryant
Hamilton, Homer ....	G. S. ....	De Smet
Hanson, Hazel ....	G. S. ....	Brookings
Hawbecker, James R. ....	Agr. ....	La Grand, Ia.
Hemingway, Robert ....	Py. ....	Mattoon, Wis.
Hewett, Howard ....	Agr. ....	Arlington
Hewett, Floyd ....	G. S. ....	Arlington
Holzman, Albert J. ....	Py. ....	Bowdel
Holmes, Clara ....	H. E. ....	Brookings
Hoon, Glenn ....	Agr. ....	Kadoka
Hoover, Harold ....	Agr. ....	Brookings
Horsfall, Alice ....	H. E. ....	Flandreau
Hough, Orilla ....	H. E. ....	Brookings
Hough, Olga ....	Sec. ....	Glenham
Hougen, Sherman ....	M. E. ....	Wilmot
Hoven, Michael ....	Sec. ....	Selby
Hoven, Jacob ....	Sec. ....	Selby
Hutchinson, Ethel ....	H. E. ....	Webster
Hyde, Hara ....	C. E. ....	Brookings
Johnson, Gustaf ....	Agr. ....	Lake Norden
Johnson, John L. ....	Agr. ....	Lake Norden
Kneebone, John ....	Agr. ....	Chrisholm, Minn.
Ladd, Leonard ....	G. S. ....	Brookings
LaSell, Leola ....	H. E. ....	Waubay
Lien, Ruby ....	H. E. ....	Brookings
Lister, P. B. ....	G. S. ....	Bixby
Lynn, Jennie ....	H. E. ....	Huron
Mann, Lyman L. ....	Agr. ....	Clark
Mathews, Hubert ....	G. S. ....	Brookings
Matthews, Ray H. ....	Agr. ....	Howard
McFadden, Edgar ....	Agr. ....	Webster
Michaels, Ernest ....	C. E. ....	Watertown
Miller, Arthur ....	Agr. ....	Madison
Myrland, Clarence ....	Agr. ....	Onawa, Ia.
Nelson, Floyd ....	Sec. ....	Brookings
Nelson, Arthur ....	Agr. ....	Rochester, Minn.



Olson, Wm. D. ....	G. S. ....	Volga
Perisho, Leland ....	Agr. ....	Carmel, Ind.
Otterness, Florence ....	G. S. ....	Brookings
Peterson, Edward ....	Py. ....	Viborg
Pickett, Hubbie ....	E. E. ....	Brookings
Pier, Lenora ....	H. E. ....	Woonsocket
Poage, Ellis ....	E. E. ....	De Smet
Randall, Elizabeth ....	H. E. ....	Brookings
Rasmussen, Ethel ....	Py. ....	Lake Preston
Rasmussen, Ray ....	Agr. ....	Bridgewater
Reid, Phyllis ....	H. E. ....	Castlewood
Revell, James E. ....	Agr. ....	Brookings
Rilling, Elsie ....	H. E. ....	Brookings
Ronne, Anthony ....	Py. ....	Rapid City
Ross, Jerry B. ....	Agr. ....	Mellette
Rugg, Georgia ....	H. E. ....	Artesian
Saum, Donald B. ....	M. E. ....	Brookings
Scadden, Richard E. ....	Py. ....	White
Shepard, James Jr. ....	G. S. ....	Brookings
Simons, Stella ....	H. E. ....	Castlewood
Sinclair, Mildred ....	H. E. ....	Beresford
Skinner, Nettie ....	G. S. ....	Onida
Spawn, Elmo C. ....	E. E. ....	Chester
Sohn, Elmer ....	Agr. ....	Huron
Steensland, Theodore ....	Agr. ....	Beresford
Stone, Helen ....	G. S. ....	Watertown
Stone, Mabel ....	G. S. ....	Watertown
Swenson, Joseph D. ....	Agr. ....	Fulton
Stratton, Dale ....	G. S. ....	Miller
Strachan, Thomas ....	Agr. ....	Chelsea
Tabor, Floyd E. ....	Py. ....	Garretson
Thelin, Guy A. ....	Agr. ....	Sioux Falls
Thompkins, Arthur ....	Agr. ....	Wyoming, Ia.
Urton, John Raymond ....	Agr. ....	Fulton
Walker, Bruce W. ....	Agr. ....	Huron
Walters, Clifton ....	Agr. ....	Bruce
Woodruff, Victor ....	G. S. ....	Miller

## SPECIALS.

Name.	Course.	Home.
Blakely, Mrs. C. H. ....	H. E. ....	Brookings
Brown, Mrs. F. E. ....	Sec. ....	Brookings
Cramer, Wilson ....	Agr. ....	Brookings
Culhane, Roger ....	Sec. ....	Brookings
Locke, Mrs. Alice ....	H. E. ....	Brookings

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Marquardt, Elizabeth	H. E.	Wentworth
Miller, Mrs. Krete	H. E.	Brookings
Mitchell, Arthur	G. S.	Brookings
Steece, F. B.	Agr.	Wessington Springs

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### PREPARATORY STUDENTS.

#### Fourth Year.

Name.	Home.
Blakeley, Clifford	Brookings
Bucholz, Adolph	Brookings
Bucholz, Rudolph	Brookings
Colliton, Dollie	Brookings
Criswell, Robert	Brookings
Emly, Joseph	Pekin, Ind.
Goddard, Bertin	Hot Springs
Green, Carrol	Brookings
Lynn, Floyd	Wolsey
Millard, Lloyd	Garretson
Mitchell, Samuel S.	Watertown
Neal, Frank	Aurora
Piper, Mamie	Carpenter
Platt, Ida	Viborg
Poulson, Clyde	Castlewood
Shaw, Inez	Estelline
Templeton, Elva	Wessington
Wilson, Edith	Brookings
Woodruff, Lewis	Wessington
Wood, Milton	Brookings

#### Third Year.

Name.	Home.
Alrick, Lillia	Brookings
Berg, Arnold	Stockholm
Burke, Milton	Rapid City
Burgess, John	White
Chenoweth, Grace	Wolsey
Drees, Bertha	Timber Lake
Farries, Russell	Hitchcock
Fasbender, Veronica	Hendricks, Minn.
Felton, Hazel	Bushnell
Feuerhelm, Elva	Brookings
Fjeld, Kamilla	Brookings
Griffith, Harrold	Cresbard

Hansen, Eva	Brookings
Hasle, Arthur	Brookings
Johnson, Esther	Brookings
Koch, Maggie	Miller
Loyd, J. F.	Dubois, Wyo.
Merriman, Grace	Carpenter
Rogers, John	Conde
Smith, Clarence	Henry
Trumm, Archie	Hayti
Wilson, Madge	Brookings
Wolber, Oscar	Brookings

### Second Year.

Name.	Home.
Anderson, Hanna	Volga
Beals, Daniel	Brookings
Biggar, Ellen	Brookings
Burdett, William	Arlington
Cooley, Haldon	Garretson
Duennermann, Edward	Smithwick
Friday, Geneva	Mineral Point, Wis.
Gilbert, Arthur	Buffalo
Johnson, Elmer	Doland
Ondell, Manoah	Conde
Oyloe, Gerhart	Brookings
Pfeiffer, Helena	Volin
Phipps, Lynn	Garden City
Pope, Clarence	Miles City, Mont.
Smith, Charles	Brookings
Stangland, Elmer	Brookings
Steuerwald, Paul	Wolsey
Swering, Lucy	Brookings
Worden, Winnie	Brookings

### First Year.

Name.	Home.
Anderson, Alma	Hitchcock
Aronson, Alfred	Strandburg
Bryan, Ruth E.	Oakes, N. D.
Felton, Muriel	Bushnell
Johnson, Helman	Brookings
Kreiman, Walter H.	Hitchcock
Lee, Henry S.	Brookings
Lindgren, Elsie	Florence
McCartney, Willard	Conde

Milhouse, Roy	Alpena
Millar, Orville	Kasper
Moore, Eva	Denver, Colo.
Nesseth, Gladys	Volga
Perrin, Alta	Brookings
Peterson, Ira	Lily
Porter, R. Paul	Onida
Reeves, Frank	Selby
Rude, Ida	Brookings
Schulz, Hattie	White
Severson, Lenora	Volga
Stone, Willis	Cresbard
Thompson, Gaylord	Alexandria
Turner, Aris	Vienna
Wold, Henry G.	Brookings

### MUSIC STUDENTS.

Name.	Course.	Home.
Abbot, Walter	Violin	Tyndall
Alrick, Lillia	Piano	Brookings
Anderson, Alma	Piano	Hitchcock
Anderson, Leslie	Cornet	Brookings
Baker, Delilah	Voice	Aurora
Bryan, Ruth	Piano	Oakes, N. D.
Bunday, Ray	Clarinet	Brookings
Button, Mrs. H. L.	Voice	Brookings
Dokter, John	Clarinet	Andover
Drees, Bertha	Piano	Timber Lake
Drury, Joseph	Cornet	Chamberlain
Fasbender, Veronica	Piano	Hendricks, Minn.
Fjeld, Kamilla	Piano	Brookings
Frease, Kathryn	Piano	Rapid City
Fryer, Julia	Piano & Voice	Doland
Green, Carrol	Piano & Voice	Brookings
Grabber, Elizabeth	Piano	Freeman
Halligan, Marie	Piano & Voice	Bryant
Hamilton, Homer	Violin	DeSmet
Haugen, Minnie	Piano	Wallace
Horsfall, Alice	Piano	Flandreau
Hutchinson, Ethel	Piano	Webster
Johnson, Elmer	Violin	Doland
Johnson, Esther	Piano	Brookings
Jones, Horace	Clarinet	Mitchell

Koch, Maggie	Piano	Miller
Kopperud, Harmon	Clarinet	Lake Preston
Loyd, J. F.	Voice, Piano & Violin	Dubois, Wyo.
Moore, Eva	Piano & Voice	Denver, Colo.
Ondell, Manoah	Voice	Conde
Otterness, Florence	Piano	Brookings
Oyloe, Gerhart	Cello & Voice	Brookings
Pfeiffer, Helena	Piano	Volin
Platt, Ida	Piano	Viborg
Purdy, Ruth	Piano	Brookings
Rude, Ida	Piano	Brookings
Saum, Donald B.	Clarinet	Brookings
Steuerwald, Paul	Piano	Wolsey
Stone, Mabel	Piano	Watertown
Stone, Helen	Voice	Watertown
Swering, Lucy	Piano	Brookings
Templeton, Elva	Piano	Wessington
Thornby, Mary	Voice	Deadwood
Turner, Aris	Piano	Vienna
Waffle, Fern	Piano & Voice	Marion, Ia.
Wagner, Colman	Violin	Selby
Walters, Clifton	Violin	Bruce
Youngberg, Guy E.	Violin	Brookings
Youngberg, Mamie	Piano & Voice	Brookings

### SCHOOL OF AGRICULTURE.

#### Fourth Year.

Name.	Home.
Gilbert, Winnie	Prosser, Wash.
Price, W. G.	Tulare
Slocum, Marion A.	Ipswich
Ruhlman, Donald	Rockham

#### Third Year.

Name.	Home.
Arp, Carl	Chamberlain
Allinson, Earl	Gary
Anderson, Edna	DeSmet
Bower, Ralph	Correctionville, Ia.
Berry, Earl	Delmont
Bierman, Christ	Mansfield
Greguson, Helmer	Inwood, Ia.
Glidden, Walter	Millboro
Gigg, Lucille	McClure



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Graves, C. L. ....	Ashton
Howell, Everett ....	Florence
Griffith, Gar ....	Cresbard
Holly, Max ....	Dempster
Holtquist, Alder ....	Milbank
Halgerson, Ralph ....	Canastota
Holt, Raymond ....	Clear Lake
Horen, Clarence ....	Cresbard
Hinsvark, Melvin ....	Brandt
Halverson, Hilda ....	Kenneth
Hatlestad, Laura ....	Garretson
Horsley, Alta ....	Virgil
Johnson, Gladys ....	Doland
Kasten, Alfred ....	Humboldt
Keck, Marvin ....	Brookings
Keck, Myrtle ....	Brookings
Klungness, Tilda ....	Garretson
Kvalshaug, Fred ....	Centerville
Larson, Lloyd J. ....	Warner
Lindsey, Grace ....	Brookings
Mueller, Robert ....	Madison
Nelson, Alfred ....	Clair City
Onstine, Everett ....	Flandreau
Peterson, Lawrence ....	Virgil
Payne, Foster ....	Forbes
Pirlet, Harry ....	Lake Preston
Perso, Ruth ....	Brookings
Petry, Anna ....	Hawarden, Ia.
Prunty, Francis ....	Andover
Spear, Kenneth ....	Draper
Spear, Mary A. ....	Draper
Sloat, Roy ....	Lowry
Sloat, Ben C. ....	Lowry
Slade, Allan ....	Fulton
Sloan, James ....	Brookings
Smith, Maurice ....	Henry
Swanson, Elmer ....	Hawarden, Ia.
Sullivan, William ....	Montrose
Twidwell, Mabel ....	Brookings
Wallace, Henry ....	Britton
Wallace, Norman ....	Britton
Wallace, Percy ....	Britton
Wilcox, Samuel ....	Brookings
Wilcox, Mae ....	Brookings
Witzel, Roy ....	Letcher

## Second Year.

Name.	Home.
Amsden, George .....	Groton
Anderson, Ida .....	Tulare
Andreessen, Cornelius .....	Tea
Brown, Roy .....	Yankton
Bishop, Julius .....	Montrose
Bakke, Elmer .....	Webster
Belk, Vernon .....	Henry
Best, Charles .....	Edmond
Bisgard, Elmer .....	Waubay
Bury, Nicholas .....	Holmquist
Berg, Harry .....	Stockholm
Bjerke, Elmer .....	Andover
Brose, Arthur .....	Arlington
Corothers, John .....	Clear Lake
Chrisler, Kenneth .....	Harrisburg
Carley, Robert .....	Doland
Crisman, Leo .....	Armour
Coye, Floyd .....	Kadoka
Doner, David .....	Gorman
Dvorak, Frank .....	Redfield
Eaton, Simon .....	Miller
Frederichsen, Martin .....	Big Stone
Griffin, Phillip .....	Hot Springs
Green, Ethan .....	Lake Preston
Goodwin, John .....	Yankton
Halverson, Alma .....	Kenneth, Minn.
Hawes, Hazel .....	Sherman
Janssen, George .....	Castlewood
Jencks, Arden .....	Bancroft
Johnson, Hartwick .....	Goodwin
Jones, Charles .....	Kirley
Kirkwood, Elizabeth .....	Rollinsdale
Knudson, Anna .....	DeSmet
Knudson, Victor .....	DeSmet
Kustes, George .....	Mt. Vernon
Lindgren, Arnold .....	Florence
Legg, Clarence .....	Artesian
Moyle, Edwin .....	Westport
McFadden, Joseph .....	Huron
Moen, Louis .....	Effington
Mueller, Laura .....	Madison
McMahon, Russell .....	Bruce
Nord, Alfred .....	Milbank

Otto, Irving	Chamberlain
Payne, Benjamin	Forbes
Powers, Harry	Delmont
Peterson, Royal	Akron, Ia.
Peterson, Phillip	Brookings
Peterson, P. D.	Virgil
Peterson, William	Lily
Peck, Carl	Belle Fourche
Paulson, Joseph	Brandt
Reinecke, Raymond	Redfield
Rude, Grant	Brookings
Stenson, Stenie	Fulton
Smith, Joseph	Sioux Falls
Sueltz, Arthur	Groton
Sloat, Judd	Lowry
Sloan, Lester	Brookings
Seaver, Lloyd	Garden City
Scott, Lester	Clark
Tyler, Arthur	Renner
Vearrier, Maude	Virgil
Wright, George	Valley Springs
Wolverton, Don	Doland
Westgaard, Hannah	Astoria
Wolf, Marie	Esmond

### First Year.

Name.	Home.
Andrews, Freeman	Lake Andes
Aggergaard, Peter	Irene
Ackley, Bliss	Bryant
Anderson, Melvin	Valley Springs
Anderson, Conrad	Brandon
Amsden, Wallace	Groton
Abernathy, Ella	Richards
Abernathy, Milam	Richards
Brown, Carl	Lucas
Bapp, William E.	White Rock
Bush, Emmet	Colome
Best, Dewey	Esmond
Best, Earl	Esmond
Bakke, Oliver	Webster
Bisgard, Roy	Waubay
Blodgett, Roy	Gayville
Bevington, James	Ree Heights
Bierman, George	Mansfield

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Bend, Hazel	Shabona, Ill.
Brandle, Oscar	Pierpont
Bly, Bertha	Garretson
Conrad, DeWitt T.	Mitchell
Corothers, James	Clear Lake
Crisman, Roy	Armour
Christofferson, Anna	Lake Preston
Crosser, Ora	Brookings
Cruson, Ralph	Miller
Curtis, Leroy	Boulder, Colo.
Cwach, Helen	Yankton
Davies, Chester	Cresbard
Davies, Elmer	Cresbard
Davis, Ralph	Hurley
Engen, Edward	Canton
Fasbender, Benjamin	Hendricks, Minn.
Frandsen, Josephine	Brookings
Glenn, J. Albert	Canastota
Griffith, Victor	Bryant
Grinols, Lance	Brookings
Gustafson, Ben	Orion
Gross, Joe	Freeman
Gross, Harold O.	Madison
Hanson, Carl	Lily
Hanson, Albert	Elk Point
Hawkes, Walter	Pedro
Hasz, Emanuel	Parkston
Haden, Melvin	Toronto
Harris, Clayton	Bryant
Haxby, David	Hardingrove
Heath, Ella	Brookings
Homewood, Madge	Wessington Springs
Hosmer, Thomas	Fedora
Hawes, Bell	Sherman
Hamak, Mary	Wecota
Handur, Eddenna	Brookings
Hoogshaugen, Wm.	Parker
Haugen, Minnie	Wallace
Jensen, James	Erwin
James, Donald	Plankinton
Johnson, Clifford	Brookings
Jordan, Elmer	Waterloo, Wis.
Johnson, Reuben	Groton
Johnson, Richard	Groton
Jones, Harvey L.	Delmont

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James, Erma .....	Plankinton
Judd, Birdie .....	Brookings
Kubowitz, Herbert .....	Herreid
Knox, Charles .....	Binder
Krogvig, Mark .....	Mission Hill
Krogvig, Anna .....	Mission Hill
Klopstad, Andrew .....	Burbank
Lewis, Cecil .....	Ashton
Linka, John .....	Tyndall
Lindgren, Jennie .....	Florence
Miles, Lynn .....	Conde
McGinnis, Elmer .....	Tulare
Merriman, Arthur .....	Carpenter
Murphy, Clyde .....	Oldham
Munson, Albin .....	Lily
Neyhart, Earl .....	Gorman
Nolte, Otto .....	Butler
Nelson, Helen .....	Claire City
Otto, Richard C. ....	Tulare
Paul, Eva .....	Doland
Paulson, Albert .....	Centerville
Price, Floy .....	Tulare
Plagens, Oscar .....	Garden City
Peterson, Ben .....	Fedora
Peterson, Norman .....	Fedora
Peck, Reuben .....	Belle Fourche
Pederson, Clarence .....	Gayville
Pederson, Agnetta .....	Gayville
Peterson, Inga .....	Lily
Petry, Kathryn .....	Hawarden, Ia.
Poppen, Grace .....	Estelline
Putzke, Edna .....	Humboldt
Putzke, Lawrence .....	Humboldt
Rasmuson, Arne .....	Winfred
Rehnke, Ella .....	Crandon
Rehnke, Ernest .....	Crandon
Rehnke, Herbert .....	Crandon
Rupple, Leo. ....	Alpena
Rundell, Howard .....	Hurley
Rundell, Leslie .....	Hurley
Rang, Ernest .....	Parker
Rea, Clarence .....	Garden City
Rovang, Theodore .....	Corson
Rohl, Willie .....	Mobridge
Robbins, Albert .....	Spencer



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Ravndal, G. B. ....	Novak
Sathre, Sam ....	Trent
Stewart, Myrvin ....	Britton
Sohrt, John ....	Rockham
Stine, Robert ....	Webster
Shank, Ray ....	Aurora
Seaver, Willis ....	Garden City
Sorenson, James C. ....	Trent
Sorenson, Elmer ....	Erwin
Sisson, Newell ....	Sioux Falls
Schlobohm, Matie ....	Aurora
Schwartz, Arthur ....	Miller
Stitt, Carrol ....	Hitchcock
Stitt, Harold ....	Hitchcock
Strunk, John ....	Irene
Strunk, Bernhard ....	Irene
Svenson, Alfred ....	Ethan
Stevens, Susie ....	Brookings
Shordicke, Ivetta ....	Brookings
Schult, Raymond ....	Doland
Seagreen, Grace ....	Turton
Tvedt, Leonard ....	Volga
Trygstad, Joseph ....	Brookings
Thompson, Lewis ....	Mission Hill
Tate, May ....	Brookings
Vallier, Ruth ....	Colman
Vig, Inga ....	Dell Rapids
Wagner, Walter ....	Elk Point
Wein, Eddie ....	Butler
Willrodt, Harold ....	Chamberlain
Wolters, Arnold ....	Winfred
Wolner, Henry ....	Frankfort

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## SUMMER SCHOOL STUDENTS.

Name.	Home.
Ammons, Mina ....	Aurora
Ammons, Ruth ....	Aurora
Anderson, Anna ....	St. Lawrence
Anderson, Georgia ....	Brookings
Arvidson, Mae ....	Arlington
Bagley, Frances ....	Brookings
Bancroft, Harriett ....	Columbus, O.
Bane, Harriet ....	Aurora

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Bane, Mae .....	Aurora
Board, Mary .....	Brookings
Bentson, Edna .....	White
Berg, Helena .....	Brookings
Blakeley, Herbert .....	Brookings
Bogstie, Emma .....	Brookings
Blakeslee, Mabel .....	Brookings
Bricton, Charmain .....	Brookings
Bricton, Thelma .....	Brookings
Buck, Florence .....	Bruce
Burnham, Mildred .....	Bushnell
Bushnell, Edna .....	Brookings
Butler, Mrs. T. R. ....	Brookings
Caldwell, Florence .....	Brookings
Canfield, Ethel .....	Brookings
Carroll, Mayme .....	White
Casley, Lulu .....	Brookings
Catlett, Winifred .....	Brookings
Chappell, Bess .....	Brookings
Cheever, Harriett .....	Brookings
Cochran, Effie .....	Miller
Cole, Harold .....	Brookings
Cole, Ima .....	Brookings
Cole, Lynn .....	Brookings
Copping, Edna .....	Bushnell
Culbertson, Mattie .....	Brookings
Davis, Elmer .....	Brookings
Dawes, Adelia .....	Brookings
Donaldson, Myrtle .....	Brookings
Dunn, Ray .....	Bryant
Eberlein, Clara .....	Aurora
Erickson, Esther .....	Bruce
Erickson, Lottie .....	Bruce
Erickson, Minnie .....	Bruce
Evans, Addie .....	Brookings
Evers, Clarence .....	Brookings
Feeney, Ruth .....	Elkton
Flemming, Gertrude .....	Elkton
Flemming, Julia .....	Elkton
Flemming, Loretta .....	Elkton
Francis, Ada .....	Brookings
Freeman, John .....	Brookings
Friedel, Amanda .....	Bruce
Fryer, Julia .....	Brookings

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Gehant, Marie .....	Aurora
Getty, Janey .....	Brookings
Gilbert, Gladys .....	Brookings
Godron, Mabel .....	White
Godron, Paul .....	White
Greenley, Jennie .....	Brookings
Gunderson, Ida .....	Volga
Handwerk, Clara .....	Brookings
Hanson, Ellen .....	Lily
Hanson, Josephine .....	Lily
Hanson, Mabel .....	Lily
Haugen, Berdick .....	Brookings
Hays, Constance .....	Elkton
Heck, Josephine .....	Elkton
Hendricks, Mae .....	Brookings
Higgins, Ella .....	Elkton
Hinch, Ruby .....	White
Hoffman, Martha .....	Bruce
Hoffman, Theresa .....	Bruce
Holmes, Blanche .....	Brookings
Holmes, Margaret .....	Brookings
Honan, Mamie .....	Brookings
Howe, Matilda .....	Cottonwood
Howe, Sadie .....	Cottonwood
Hoy, Belle .....	Aurora
Huyck, Nina .....	Gettysburg
Iverson, Selma .....	Brookings
Jamison, Nellie .....	White
Jarman, Ruby .....	Brookings
Jarvis, Ruth .....	Brookings
Jepson, Alma .....	Arlington
Jerde, Edith .....	Brookings
Jessen, Lora .....	White
Johnson, Myrtle .....	Brookings
Johnston, Sara .....	Brookings
Judd, Laura .....	Bushnell
Karlstad, Julia .....	Brookings
Karlstad, Selma .....	Brookings
Kelly, Anna .....	Estelline
King, Esther .....	White
Kirby, Pearle .....	Aurora
Knutson, Frances .....	Brookings
Korte, Anna .....	Aurora
Krumm, Lillian .....	Bruce

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Lamb, Matilda .....	Brookings
Lanphier, Hattie .....	Brookings
Larson, Ora .....	Brookings
Lawler, Frances .....	Kandiyohi, Minn.
Lawler, Josie .....	Kandiyohi, Minn.
Lawler, Rosella .....	Kandiyohi, Minn.
Lehner, Beatrice .....	Brookings
Lein, Myrtle .....	Brookings
Lein, Ruby .....	Brookings
Looysen, Iva .....	White
Looysen, Sylvia .....	White
Lortscher, Rufus .....	Elkton
Lynch, Edward .....	Brookings
Madden, Marieta .....	Brookings
Mathews, Cornelia .....	Brookings
Mathews, Hubert .....	Brookings
Matson, Mamie .....	Brookings
McElmurry, Loretta .....	Brookings
McKinnon, Margaret .....	Brookings
McMillan, A. L. ....	Alpena
McMillan, O. G. ....	Alpena
McCarthy, Rose .....	Elkton
McCoy, Erdman .....	Brookings
Miller, Harold .....	Brookings
Morris, Edna .....	Aurora
Morris, Elsie .....	Aurora
Nelson, Laura .....	Brookings
Nilsson, Anna .....	Altamont
Nixon, Jessie .....	St. Paris, O.
Nord, Florence .....	Brookings
Olson, Johanna .....	Brookings
Otterness, Florence .....	Brookings
Otterness, Ida .....	Brookings
Parker, Paul J. ....	Brookings
Pease, Myrtle .....	Brookings
Perso, Ruth .....	Brookings
Peterson, Edith .....	Brookings
Peterson, Helen .....	Brookings
Phillips, Blanche .....	Aurora
Potter, Blanche .....	White
Rahn, Sophronia .....	Verdi, Minn.
Revel, Marie .....	Brookings
Rice, Julia .....	Flandreau
Roberts, Flora .....	Elkton

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Ross, Ethel .....	Arlington
Scharf, Sadie .....	Grindstone
Schlatter, C. F. ....	Brookings
Schulz, Hattie .....	White
Scott, Ethel .....	Volga
Shaw, Lucy .....	Castlewood
Shepard, Helen .....	Brookings
Sherwood, Lila .....	White
Siberts, Miriam .....	Brookings
Sickler, Lucille .....	Wessington Springs
Sickler, Mrs. George .....	Wessington Springs
Sivert, Vera .....	Elkton
Skinner, Nettie .....	Onida
Sloan, Edith .....	Brookings
Sloan, Janet .....	Brookings
Slocum, Lyla .....	Brookings
Smith, Mamie .....	Brookings
Smith, Raymond .....	Bryant
Somers, Grace .....	Brookings
Soule, Neva .....	Brookings
Stermer, Laura .....	White
Strong, Will .....	Elkton
Stumley, Otelia .....	Volga
Towey, Alice .....	Elkton
Towey, Margaret .....	Elkton
Trygstad, Charlotte .....	Brookings
Trygstad, Daniel .....	Brookings
Trygstad, Marie .....	Brookings
Turner, Lona .....	Brookings
Tuttle, Minnie .....	Arlington
Watson, Edith .....	Brookings
Weber, Anna .....	Brookings
Wendelken, Maud .....	Elkton
Wendelken, Harry .....	Elkton
Wilson, Edith .....	Elkton
Wilson, Ella .....	Elkton
Winters, Minnie .....	Brookings
Wood, Laura .....	Brookings
Woodard, — — .....	Volga
Woodle, Mae .....	Elkton
Wright, Ora .....	New Underwood
Yule, Harold .....	Brookings
Zebell, Hulda .....	Estelline
Zumwalt, W. W. ....	Columbia



**SHORT COURSES.****Cream Testing Course.**

Name.	Home.
Bette, P. L. ....	Watertown
Binandt, A. H. ....	Watertown
Bishop, Perry ....	Bruce
Clinton, P. E. ....	Beebe
Cowling, W. E. ....	Sioux City, Ia.
Fischer, Chas. H. ....	Beebe
Gunderl, Wm. ....	Tolstoy
Hich, John R. ....	Eureka
Hughart, G. R. ....	Mitchell
Kalbing, John ....	Omaha, Neb.
Kegley, J. L. ....	Sioux City, Ia.
Kinport, M. K. ....	Mitchell
Morse, J. R. ....	Dell Rapids
Robinson, F. D. ....	Redfield
Schumacher, J. ....	Tripp
Tvedt, L. L. ....	Mitchell
Weber, J. J. ....	Dimock
Wurl, Walter ....	De Smet

**Creamery Course.**

Name.	Home.
Coburn, C. O. ....	Park, Kan.
Falkenstein, Anton ....	Groton
Frimoth, Elmer ....	Tyler, Minn.
Greig, James ....	Belle Fourche
Jacobson, Fred E. ....	Des Moines, Ia.
Laude, Harvey L. ....	Brookings
Madsen, Berg ....	Grand Forks, N. D.
Meiers, George ....	Avon
Smith, B. A. ....	Webster
Spencer, Ray ....	Highmore
Stephen, Ben ....	Elgin, Minn.
Thomsen, Peter B. ....	Superior, Neb.

**Steam Engineering Course.**

Name.	Home.
Aggergaard, Peter ....	Irene
Bittner, Walter ....	Chelsea
Christiansen, Peder Christian ....	Volin
Davies, Elmer ....	Cresbard

Doonan, Harry J. ....	Ipswich
Erickson, Oliver ....	Summit
Forsberg, Adolph E. ....	Canova
Geraldson, Emanuel ....	Utica
Graham, Joseph Edgar ....	Coatesville, Ind.
Gurney, Paul ....	Spencer
Johnson, Elmer E. ....	Doland
Johnson, Alfred M. ....	Waubay
Leis, Albert ....	De Smet
Olson, Louis Arthur ....	Chamberlain
Mesney, Morris ....	Volin
Molskness, Philip ....	Colman
Prieheim, Adolph ....	Hurley
Preheim, Thomas J. ....	Marion
Ruml, George ....	Letcher
Schmidt, John ....	Alpena
Schmitger, Harry ....	Mansfield
Stone, Willis C. ....	Cresbard
Sundet, Philip ....	Brookings
Tschetter, Peter S. ....	Freeman
Waltner, Edward J. ....	Marion Jet.

### Two Weeks Automobile Course.

Name.	Home.
Bratberg, John ....	Utica
Brown, Cecil ....	Brookings
Bushnell, J. H. ....	Brookings
Bushnell, Edna ....	Brookings
Cole, B. O. ....	Alcester
Clark, O. T. ....	Huron
Costlow, H. W. ....	Wentworth
Dempewolf, Charles ....	Harrisburg
Dempewolf, Alvin ....	Harrisburg
Fix, Henry ....	Garretson
Fowler, Henry A. ....	St. Paul, Minn.
Gardner, J. J. ....	Brookings
Green, Mrs. B. T. ....	Brookings
Grinell, Ivan ....	Beresford
Iverson, Alfred ....	Brandon
Johnson, J. T. ....	Watertown
Johnson, Helman ....	Brookings
Johnson, I. L. ....	Huron
Jackson, M. A. ....	Egan
Cringen, P. L. ....	Coleman

Merriman, H. R. ....	Carpenter
McQueen, H. E. ....	Harrold
Nelson, Frank G. ....	Huron
Olson, Bernhardt ....	Utica
Onstine, Wendell L. ....	Flandreau
Sanders, Fred ....	Huron
Solberg, Harry ....	Brookings
Ulstad, Carl ....	Colman
White, Charles A. ....	White Lake

### Farm and Home Course.

#### Men.

Name.	Town.	County.
Alrick, Lewis J. ....	Brookings	Brookings
Allinson, Herbert M. ....	Doland	Spink
Averill, Harry ....	Aurora	Brookings
Bryant, J. F. ....	Brookings	Brookings
Brooksmith, Wm. ....	Arlington	Brookings
Baldridge, F. T. ....	Brookings	Brookings
Breekke, H. H. ....	Lake Preston	Kingsbury
Blakley, Robt. ....	Brookings	Brookings
Brown, W. M. ....	Aurora	Brookings
Brown, G. H. ....	Brookings	Brookings
Caldwell, W. A. ....	Brookings	Brookings
Chapman, Claude ....	Brookings	Brookings
Chicoine, Benjamin ....	Jefferson	Union
Chambers, George ....	Aurora	Brookings
Chapman, Geo. ....	Brookings	Brookings
Crase, W. M. ....	Brookings	Brookings
Cook, Ed ....	Bushnell	Brookings
Cook, B. P. ....	Bushnell	Brookings
Chambers, W. S. ....	Aurora	Brookings
Christensen, Chris ....	Brookings	Brookings
Donaldson, W. H. ....	Brookings	Brookings
Dunton, H. A. ....	Brookings	Brookings
English, Victor ....	Brookings	Brookings
Erickson, John M. ....	Volga	Brookings
Faulkner, F. W. ....	Brookings	Brookings
Forgard, P. C. ....	Lake Preston	Kingsbury
Geraldson, Emanuel ....	Utica	Yankton
Glanzer, Joe E. ....	Dolton	Turner
Geyer, P. H. ....	Manchester	Kingsbury
Garrison, G. E. ....	Aurora	Brookings
Gurney, J. T. ....	Spencer	McCook

Hammond, F. M. ....	Brookings	Brookings
Heeren, D. M. ....	Chancellor	Turner
Halvorson, H. C. ....	Sinai	Brookings
Hillistad, E. ....	Volga	Brookings
Haden, Harry ....	Toronto	Deuel
Helfinstine, Harry ....	Parker	Turner
Hansen, M. ....	Elkton	Brookings
Harte, Ed ....	Brookings	Brookings
Haffdahl, Ben ....	Sinai	Brookings
Harvey, Clem ....	Colman	Moody
Hay, J. W. ....	Revillo	Grant
Hay, W. F. ....	Revillo	Grant
Johnson, E. H. ....	Miller	Hand
Johnson, Ray ....	Brookings	Brookings
Johnston, John ....	Brookings	Brookings
Johnson, Hennings S. ....	Egan	Moody
Johnson, Gunder ....	Castlewood	Hamlin
Jesme, John ....	Volga	Brookings
Jameson, H. H. ....	Canova	Miner
Johnson, O. K. ....	Hetland	Kingsbury
Kendall, A. J. ....	Brookings	Brookings
Karr, J. W. ....	Ireton, Iowa	
Karr, M. A. ....	Brookings	Brookings
King, Jesse ....	Toronto	Deuel
Keck, J. A. ....	Brookings	Brookings
Kunkleman, D. J. ....	Erwin	Kingsbury
Karlstad, H. M. ....	Brookings	Brookings
Lindsey, James ....	Brookings	Brookings
Longman, A. C. ....	Brookings	Brookings
Longman, Wilford ....	Brookings	Brookings
Larson, L. J. ....	Brookings	Brookings
Lynch, Chas. ....	Brookings	Brookings
Lynch, Chris ....	Brookings	Brookings
Lenocher, J. W. ....	Bushnell	Brookings
Lewis, Knute ....	Lake Preston	Kingsbury
McKee, John B. ....	Wagner	Charles Mix
McMurty, J. C. ....	Wessington	Beadle
Moen, A. O. ....	Garretson	Minnehaha
Mueller, Geo. H. ....	Madison	Lake
Menkveld, Elbert ....	Bemis	Deuel
Moe, Peter O. ....	Renner	Minnehaha
McLaurin, John ....	Hazel	Hamlin
Mitchell, L. ....	Brookings	Brookings
Miller, Glen E. ....	Brookings	Brookings
Miller, L. A. ....	Brookings	Brookings

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Mesney, Morris .....	Volin .....	Yankton
Magirl, Dennis C. ....	Woonsocket .....	Sanborn
Mann, Daniel .....	Milaca, Minn.	
Matson, James .....	Lake Preston .....	Kingsbury
Mitchell, Ora .....	Bruce .....	Brookings
McMahon, H. S. ....	Bruce .....	Brookings
Norton, J. M. ....	Aurora .....	Brookings
Norton, F. D. ....	Brookings .....	Brookings
Nicol, John .....	Wetonka .....	Brookings
Nielson, F. G. ....	Carpenter .....	Clark
Otto, A. W. ....	Tulare .....	Spink
Otterness, O. J. ....	Brookings .....	Brookings
Ohair, E. B. ....	Brookings .....	Brookings
Odland, Rev. L. J. ....	Clark .....	Clark
Perley, Geo. A. ....	Flandreau .....	Moody
Preheim, Tom J. ....	Marion .....	Turner
Preheim, Adolph .....	Hurley .....	Turner
Prentice, Zach .....	Brookings .....	Brookings
Parker, E. T. ....	Hazel .....	Hamlin
Plumb, O. D. ....	Brookings .....	Brookings
Preussing, Ernest H. ....	Hecla .....	Brown
Plumb, W. E. ....	Bruce .....	Brookings
Rider, Leon .....	Florence .....	Codington
Rider, Wyman .....	Florence .....	Codington
Reppe, Andrew .....	Brookings .....	Brookings
Reppe, Clifford .....	Brookings .....	Brookings
Reppe, V. M. ....	Brookings .....	Brookings
Rilling, Fred .....	Brookings .....	Brookings
Rilling, Earl .....	Brookings .....	Brookings
Rohl, W. H. ....	Mobridge .....	Walworth
Rosburg, W. F. ....	Ward .....	Moody
Sutton, Will .....	Harrisburg .....	Lincoln
Schultz, Jeppe .....	Britton .....	Marshall
Shank, Ray .....	Aurora .....	Brookings
Sagness, Gilbert .....	Sherman .....	Minnehaha
Sloan, James .....	Brookings .....	Brookings
Sloan, John .....	Brookings .....	Brookings
Sloan, Will .....	Brookings .....	Brookings
Svenson, G. ....	Ethan .....	Davison
Supeldt, H. A. ....	Willow Lake .....	Clark
Saboe, Chester .....	Willow Lake .....	Clark
Schrader, Leon .....	Aurora .....	Brookings
Stivers, R. T. ....	Greene, Iowa.	
Sterud, Ernest .....	Volga .....	Brookings
Strunk, Bernard .....	Irene .....	Clay



Strunk, John	Irene	Clay
Selix, Sheridan	Brookings	Brookings
Schoenwether, A. J.	Brookings	Brookings
Spurling, Roy	Brookings	Brookings
Sheldon, M. S.	Brookings	Brookings
Smith, Ray	Brookings	Brookings
Smith, L. J.	Brookings	Brookings
Smith, S. E.	Brookings	Brookings
Soren, Pete	Lake Preston	Kingsbury
Tate, Chester	Brookings	Brookings
Tate, K. M.	Brookings	Brookings
Thier, Otto	Willow Lake	Clark
Tekrony, Garrett	Bemis	Deuel
Trulock, Grant R.	Hendrick, Minn.	
Vockrodt, E.	Hazel	Hamlin
Wetterburg, F. C.	Arlington	Brookings
Waltner, Edw. J.	Marion Jct.	Turner
Wick, John	Brookings	Brookings
Wolters, William	Winfred	Lake
Wilcox, W. B.	Brookings	Brookings
White, E. A.	Aurora	Brookings

### Women.

Name.	Town.	County.
Atkinson, Mrs. Ella	Brookings	Brookings
Baldrige, Mrs. F. F.	Brookings	Brookings
Bryant, Mrs. Etta C.	Brookings	Brookings
Brooksmith, Mrs. Wm.	Arlington	Brookings
Bryant, Elizabeth	Brookings	Brookings
Butler, Mrs. Thos.	Brookings	Brookings
Bucholz, Mrs. Mary	Brookings	Brookings
Chambers, Mrs. W. S.	Aurora	Brookings
Crace, Mrs. W. M.	Brookings	Brookings
Cornell, Mrs. Sam	Brookings	Brookings
Dunton, Mrs. H. A.	Brookings	Brookings
Giannonatti, Mrs. Peter	Ludlow	Harding
Giannonatti, Elene	Ludlow	Harding
Halvorson, Mrs. H. C.	Sinai	Brookings
Hafidahl, Mrs. Ben	Sinai	Brookings
Hess, Mrs. Vera	Watertown	Codington
Jamison, Mrs. H. H.	Canova	Miner
Lipp, Mrs. C. C.	Brookings	Brookings
Laude, Lizzy	Kingsley, Iowa	
Loomis, Mrs. H.	Brookings	Brookings
McGarry, Mrs. L. M.	Brookings	Brookings

McMahon, Mrs. H. S. ....	Bruce .....	Brookings
Ohair, Mrs. E. B. ....	Brookings .....	Brookings
Odland, Orva .....	Clark .....	Clark
Prowse, Mrs. J. ....	Brookings .....	Brookings
Raush, Mrs. Ella .....	Brookings .....	Brookings
Reppe, Mrs. A. ....	Brookings .....	Brookings
Shordicke, Miss Ivetta .....	Brookings .....	Brookings
Sharp, Mrs. D. ....	Brookings .....	Brookings
Svenson, Hilda .....	Ethan .....	Davison

**SUMMARY OF STUDENTS.**  
**1914-1915.**

Rank.	Men	Women	Totals	Grand Totals
Collegiate—				
Post Graduate Students .....	8	...	8	
Seniors .....	18	8	26	
Juniors .....	39	17	56	
Sophomores .....	53	26	79	
Freshmen .....	80	39	119	
Specials .....	4	5	9	
Total Collegiate .....	202	95	297	297
Preparatory—				
Fourth Year .....	13	6	19	
Third Year .....	9	12	21	
Second Year .....	13	6	19	
First Year .....	13	11	24	
Total Preparatory .....	48	35	83	83
Music Only .....	2	5	7	7
School of Agriculture—				
Fourth Year .....	3	1	4	
Third Year .....	40	14	54	
Second Year .....	58	9	67	
First Year .....	111	30	141	
Total School of Agriculture...	212	54	266	266
Short Courses—				
Cream Testers .....	18	...	18	
Three Months Creamery .....	12	...	12	
Five Months Engineering .....	25	...	25	
Automobile Course, 2 weeks .....	27	2	....	
Farm and Home .....	142	30	172	
Total Short Courses .....	224	32	256	256
Summer School .....	22	165	187	187
Grand Totals .....	710	387	1096	1096

# INDEX

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	Page		Page
Absences .....	36	Cooking .....	71, 130
Adams Act .....	20, 56	Courses of Study .....	39
Admission, Conditions of ...	32	Creamery Work .....	59, 137
Agriculture .....	39, 137	Credit Hour .....	34
Agronomy .....	41, 65	Dairy Husbandry .....	41, 59
Alternating Currents .....	85	Dairy Bacteriology .....	61
Alumni, List of .....	140	Dairying .....	59
Alumni Association .....	140	Dams .....	82, 83
Anatomy .....	104	Debating .....	27
Animal Breeding .....	57	Degrees .....	37
Animal Husbandry .....	40, 57	Departments .....	56
Animal Nutrition .....	58	Descriptive Geometry .....	75
Architectural Drawing and		Dietetics .....	72
Design .....	75	Dormitory .....	30
Art .....	121	Dressmaking .....	73
Assistants .....	12	Drug Assaying .....	112
Astronomy .....	98	Dynamo Design .....	85
Athletic .....	27	Dynamo Electric Machinery..	35
Athletic Grounds .....	23	Economics .....	90
Bacteriology .....	105	Education, Department of...	93
Board and Rooms .....	29	Electric Lighting .....	85
Bookkeeping .....	127	Electrical Engineering ..	46, 84
Botany .....	99	Electricity and Magnetism ..	84
Breeds of Live Stock .....	57	Electrical Measurements ...	85
Buildings .....	22	Engineering Design .....	86
Business Law .....	126	Engineering Degrees .....	37
Calendar .....	3	English .....	87
Carpentry .....	130	Entomology .....	102
Cheesemaking .....	61	Entrance Requirements ....	32
Chemistry .....	106	Equipment .....	22
Christian Association .....	28	Establishment .....	19
Civil Engineering .....	48, 79	Ethics .....	93
Collegian Staff and Organiza-		Expenses, Students' .....	28
tion .....	28	Experiment Station .....	20, 56
Committees .....	18	Experimental Engineering ..	76
Commerce Department .....	125	Faculty .....	5, 25
Conditioned Students .....	36	Faculty Committees .....	18
Contracts and Specifications.	82	Farm .....	23

	Page		Page
Farm Crops .....	65	Master's Degree .....	38
Floriculture .....	69	Masonry and Foundations ..	77
Forestry .....	70	Materia Medica .....	111
Forging .....	131	Mathematics .....	96
Free Hand Drawing .....	130	Mechanical Engineering .44,	73
French .....	89	Mechanics of Materials .....	76
Gas and Oil Engines .....	76	Mechanical Drawing ...75,	131
General Science Course .....	50	Meteorology .....	68
General Information .....	19	Military .....	29, 35, 123
German .....	89	Morrill Act .....	19, 20
Geodesy .....	82	Museums .....	24
Geology .....	68	Music .....	112
Graduates .....	161	Nature Study .....	102
Grades .....	36	Nelson Fund .....	19
Gymnasium .....	23	Oratory and Debating .....	27
Hatch Act .....	20, 56	Organizations, Student .....	26
Heating .....	23, 78	Pharmacognosy .....	101
Heredity .....	70	Pharmacy .....	55, 109
History .....	90	Physics .....	98, 129
History of Education .....	93	Physiography .....	129
Home Economics ..43, 71,	133	Physiology .....	104
Home Nursing .....	72	Piano Music .....	116
Horticulture .....	41, 68	Plant Propagation .....	71
Hydraulics .....	81	Pomology .....	70
Hygiene .....	72	Political Science .....	90
Income, Sources of .....	20	Postal Facilities .....	24
Irrigation .....	82	Preparatory Department ...	129
Inspection of Dairy Products.	61	Principles of Education ....	93
Instructors .....	12	Psychology .....	94
Jack Rabbit .....	27	Publications, Student .....	27
Kinematics .....	76	Railroad Engineering ...81,	83
Laboratories .....	24	Regents .....	4, 25
Landscape Gardening .....	70	Registration, Method of ....	35
Languages, Modern .....	89	Sanitation .....	72
Law, Business .....	126	Schemes of Study .....	39
Library .....	24	Scholarships .....	31
Lighting .....	23	School of Agriculture .....	132
Live Stock Management ...	58	Semesters .....	31
Literary Societies .....	28	Sewerage .....	83
Living Arrangements of Stu-		Sewing .....	73
dents .....	29	Shorthand .....	126
Location of College .....	22	Shops .....	24
Machine Design .....	75	Sociology .....	92
Machine Shop .....	75	Soils .....	66
Marketing .....	72	Special Short Courses.3, 38,	136



	Page		Page
Special Students .....	35	Surveying .....	80
Statics .....	77	Terms and Vacations .....	3
Station Council .....	18	Time to Enter .....	32
Steam Boilers .....	76	Textiles .....	72
Steam Engineering .....	138	Traction Engineering .....	138
Steam Engines .....	76	Tuition .....	28
Stock Breeding .....	57	Typewriting .....	126
Stock Feeding .....	58	Uniforms, Military .....	29
Stock Judging .....	57	Units of Credit .....	33
Stresses in Framed Structures	81	Vacations .....	3
Structural Design and Engi- neering .....	77, 86	Veterinary Medicine .....	63
Student Association .....	26	Violin .....	118
Student Labor .....	31	Voice .....	115
Student List .....	161	Volumetric Analysis .....	112
Student Organizations .....	28	Water Supply .....	83
Student Publication .....	27	Wood Turning .....	131
Studies .....	34	Zoology .....	104, 131

## LOCATION

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The State College of Agriculture and Mechanic Arts is located upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River. Brookings is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch of the same road making connection with the main line at th's point. The city has a population of about three thousand five hundred thrifty, intelligent and hospitable people. It is lighted by electricity and has a complete water and sewer system, owned by the municipality.

The streets are lined with trees and there are very few houses without well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes.

It is a city of clean morals. No saloon has been allowed within its limits for several years. In the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one.





58724  
1915/16

Vol. VIII

April, 1916

No. IV

South Dakota  
State College of Agriculture  
and Mechanic Arts

~~NOV 7 1918~~

BULLETIN

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with Announcements for the Year 1916-1917

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Published Quarterly by  
**THE SOUTH DAKOTA STATE COLLEGE**  
Brookings, S. D.

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Entered as second-class matter August 10, 1908, at the post-office at Brookings, S. D., under Act of July 16, 1904

# The College Bulletin

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The South Dakota State College Bulletin is published quarterly by authority of the Regents of Education.

The Bulletin contains information in detail relative to the entrance requirements of the different courses of instruction, the schedules of study, lists of instructors of the institution and its administration, equipment, organizations, publications, funds, students' expenses, scholarships, prizes, etc.

The institution includes the following departments of instruction: Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture and Forestry, Veterinary Medicine, Home Economics and Domestic Art, Mechanical Engineering, Electrical Engineering, Civil Engineering, English, Modern Languages, History and Political Science, Public Speaking, Philosophy, Mathematics and Astronomy, Physics, Botany, Entomology and Nature Study, Zoology, Chemistry, Pharmacy, Music, Art, Military Science and Tactics, and Commercial Science. There are also the Preparatory Department and the School of Agriculture. Short special courses of instruction are given in Agriculture, Dairying, Home Economics and Steam Engineering.

In addition to the instructional work there are maintained at the College the Agricultural Experiment Station and the Agricultural Extension Division.

The College bulletins are sent free, postage paid, on request. The request should indicate the department concerning which information is desired.

Address: The President, State College, Brookings, South Dakota.



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**Statement of the Ownership, Management, Circulation, Etc.**

of South Dakota State College of Agriculture and Mechanic Arts  
Bulletin published quarterly at Brookings, South Dakota, required  
by the Act of August 24, 1912.

Name of	Post Office Address.
Editor, G. L. Brown, Dean of College.....	Brookings, South Dakota
Publisher, South Dakota State College of Agriculture and Mechanic Arts.....	Brookings, South Dakota
Owners, South Dakota State College of Agriculture and Mechanic Arts.....	Brookings, South Dakota

Known bondholders, mortgagees, and other security holders, holding  
1 per cent or more of total amount of bonds, mortgages, or other  
securities: None.

ELLWOOD C. PERISHO,  
President of College.

Sworn to and subscribed before me this 6th day of April, 1916.

(Seal) R. A. LARSON,  
Notary Public.  
(My commission expires June 5, 1917).

# Calendar of 1916-1917

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## FIRST SEMESTER

1916

- June 12-July 21—Six weeks Summer School.  
September 18-19—Entrance examinations and registration.  
September 20—Work of first semester begins at 8 o'clock a. m.  
November 1—Last day for announcing subjects of theses.  
October 30—School of Agriculture opens.  
November 30-December 1—Thanksgiving recess.  
December 15—Christmas vacation begins at 1:00 p. m.

1917.

- January 2—Christmas vacation ends at 8:00 a. m.  
January 29-February 2—Examination week.

## SECOND SEMESTER

- February 6—Second semester begins at 8:00 a. m.  
March 22—School of Agriculture closes.  
May 21—Senior vacation begins.  
May 26-June 1—Examination week.  
June 3—Baccalaureate Sunday.  
June 6—Commencement exercises at 10:30 a. m.

## Calendar of Short Courses

- January 2-June 1—Course in traction engineering.  
January 2-March 23—Three months creamery course.  
The Farm and Home Course will open the afternoon of December 26.

### **Regents of Education**

Hon. Albert M. Anderson.....	Sturgis
Hon. T. W. Dwight .....	Sioux Falls
Hon. August Frieberg.....	Beresford
Hon. Frank Anderson.....	Webster
Hon. J. W. Campbell.....	Huron

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### **OFFICERS OF THE BOARD**

Hon. T. W. Dwight.....	President
Hon. I. D. Aldrich.....	Secretary
Hon. A. W. Ewert (State Treasurer).....	Treasurer

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### **Regents' Committee for the College**

Hon. T. W. Dwight

Hon. J. W. Campbell

## \*Faculty

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**ELLWOOD CHAPPELL PERISHO, A. M., M. S., LL. D., President.**

B. S., Earlham College, 1887; A. M., Earlham College, 1889; Professor of Mathematics, Guilford College, North Carolina, 1888-1892; scholar, University of Chicago, 1893-1894; fellow, 1894-1895; M. S., University of Chicago, 1895; Professor of Geology, State School, Platteville, Wis., 1895-1903; Professor of Geology, University of South Dakota, and State Geologist, 1903-1914; Dean, College of Arts and Sciences, University of South Dakota, 1907-1914; present position since August, 1914.

**GEORGE LINCOLN BROWN, Ph. D., Dean, Vice-President, and Professor of Mathematics.**

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, 1897-1910; Acting President South Dakota State College, summer and fall of 1908; Dean of the faculty, 1910; Vice-President, 1913; Acting President, February 1 to August 1, 1914; present position since August 1, 1914.

**JAMES WILBUR WILSON, M. S. A., Professor of Animal Husbandry; Director and Animal Husbandman of the Experiment Station.**

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture, Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

**GORDON W. RANDLETT, Director of the Extension Division.**

Graduate of Iowa State Normal School, 1895; B. S. A., North Dakota Agricultural College, 1908; Public Schools of Iowa, 10 years; Instructor in Applied Agriculture, North Dakota Agricultural College, 1905-1908; Assistant Professor, same institution, 1908-1909; Director College Extension, same institution, 1909-1915; Superintendent of Farmers Institutes, North Dakota, 1913-1915; present position since June, 1915.

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\*With the exception of the President, Dean, Director of the Experiment Station and Director of the Extension Division, the names occur in the order of appointment.



**JAMES HENRY SHEPARD, B. S., Professor of Chemistry; Chemist of the Experiment Station.**

B. S., University of Michigan, 1875; post-graduate student in University of Michigan, 1881-1882; High School Instructor in Natural Sciences, Ypsilanti, Michigan, 1882-1886; present position since 1888.

**HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E. Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

**NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry; Vice Director and Horticulturist of the Experiment Station.**

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; with Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor of Horticulture, Iowa Agricultural College, 1891-1895; studied in Europe, 1894; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898 and 1906-1907; to Siberia, Turkestan and Algiers, 1908-1909; for South Dakota, to Siberia, 1913; present position since 1895.

**HUBERT BERTON MATHEWS, M. S., Professor of Physics.**

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; Professor of Physics and Electrical Engineering, 1899-1909; Vice-President, 1904-1906; present position since 1909.

**BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.**

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Instructor in Pharmacy, South Dakota Agricultural College, 1895; present position since 1896.

**ADA BERTHA CALDWELL, Professor of Industrial Art.**

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; student summer course

Handicraft Guild, Minneapolis, 1905, 1906 and 1907; student Commonwealth Art School, Maine, during summer, 1910; present position since 1899.

**ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.**

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; student, University of Wisconsin, 1898, and summer session, 1907; Instructor in American History, University of Nebraska, summer session, 1909; present position since 1901.

**ROBERT BLACKWOOD FORSEE, Pe. P., Principal of the Preparatory Department.**

Principal of Pedagogy, Western College, Missouri, 1888; Principal of Schools at Elgin, Mo., 1889-1891; at Steffenville, 1892-1893; at Estelline, South Dakota, 1895-1896; County Superintendent of Schools, Hamlin County, South Dakota, 1896-1900; present position since 1901.

**WILLIAM HOWARD POWERS, A. B., A. M., Librarian and Associate Professor of English.**

A. B., Miami University, 1891; A. M., Harvard University, 1899; student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Harwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; member State Library Commission, 1913—; present position since 1905.

**CHRISTIAN LARSEN, M. S. A., Professor of Dairy Husbandry; Dairy Husbandman of the Experiment Station.**

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; studied European dairying, 1900; Dairy Instructor, Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

**MADISON CLAIR BATES, A. M., Professor of English.**

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; Scholar in English, Graduate School, Columbia University, 1909-1910; present position since 1907.

**BYRON BRIGGS BRACKETT, A. M., Ph. D., Professor of Electrical Engineering.**

A. B., Syracuse University, 1890; A. M., Syracuse University, 1893; Certificate of Proficiency in Electrical Engineering, Johns Hopkins University, 1895; Ph. D., Johns Hopkins University, 1897; Teacher of Mathematics, Dickinson Seminary, Williamsport, Pa., 1890-1892; Teacher of Higher Mathematics and Mechanical Drawing, Collegiate Department of Adelphi Academy, Brooklyn, N. Y., 1892-1893; student-instructor, Electrical Engineering Department of Johns Hopkins University, 1894-1897; Instructor in Electrical Engineering, Union College, 1897-1898; Teacher of Physics, Eastern High School, Washington, D. C., 1898-1900; Instructor in Electrical Science, Rutgers College, 1901-1903; Professor of Physics and Electrical Engineering, Clarkson School of Technology, 1903-1908; Professor of Electrical Engineering, Clarkson School of Technology, 1908-1909; Inspector of Torpedo Cable for U. S. Army, summer of 1898; Electrical Engineer for Rowland Telegraphic Company, Baltimore, Md., 1900-1901; present position since 1909.

**NOLA K. FROMME, B. S., Associate Professor of Home Economics; Assistant Principal, School of Agriculture.**

B. S. in Domestic Science, Ohio State University, 1905; Instructor in Home Economics, South Dakota State College of Agriculture and Mechanic Arts, 1907-1909; present position since 1909.

**HARRY C. SEVERIN, B. A., M. A., Professor of Entomology and Nature Study; Entomologist of Experiment Station.**

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908; Fellow in Zoology and Entomology, Ohio State University, 1908-1909; Assistant to State Entomologist, Illinois, summer of 1909; present position since 1909.

**ROBERTSON COOK, M. E., Professor of Experimental Engineering.**

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; Instructor in Mechanical and Steam Engineering, 1908-1910; Member A. S. M. E. since 1914; present position since 1910.

**SHIRLEY PUTNAM MILLER, B. S., M. A., Professor of Zoology.**

B. S., South Dakota State College, 1903; M. A., University of Minnesota, 1905; student at Minnesota Sea-side Laboratory, Vancouver Island, 1902-1904; Instructor in Zoology, South Dakota State College, 1905-1908; student at the Anatomical-Biological Institute, Berlin, and the University of Munich, 1908-1910; investigator in

Russian Zoological Laboratory, Villafranche, on the Mediterranean; present position since 1910.

**GEORGE ARTHUR STARRING, A. B., Agricultural Editor.**

A. B., Huron College, 1907; graduate Huron Business College; student Rochester Seminary, N. Y., 1907-1908; of University of Chicago, 1908-1909; summer quarter, University of Chicago, 1909; Instructor in Commerce and Economics, Sioux City High School, 1909-1910; Professor of Commerce, South Dakota State College, 1910; present position since 1911.

**ALBERT NASH HUME, B. S. A., M. S., Ph. D., Professor of Agronomy; Agronomist of Experiment Station.**

B. S. A., Purdue University, 1900; M. S., Purdue University, 1902; Live Stock Husbandman, North Louisiana Experiment Station; Instructor in Agriculture, Wenona Agricultural Institute, 1903; Instructor, Associate, Assistant Professor of Crop Production, University of Illinois and Agricultural Experiment Station. 1904-1911; student Leipzig, Germany, winter semester, 1908-1909; student Goettingen, Germany, summer semester, 1909 to winter semester 1910; Ph. D., Goettingen, December, 1910; present position since 1911.

**GARNETT HEDGE, Mus. Bac., Professor of Music.**

Graduated from Des Moines Musical College, Des Moines, Iowa, 1894; post-graduate in same institution, 1896; studied with Karleton Hackett, American Conservatory, Chicago, 1897-1898; taught in American Conservatory, sang with Castle Square Opera Co., and studied with Arthur Beresford, 1898-1899; taught at Heading College, Abingdon, Ill., 1899-1900; Supervisor of Public School Music, Lead and Deadwood (S. D.) schools, 1900-1901; traveled with Minneapolis Symphony Orchestra, 1908-09-10 and with Thomas Orchestra, February, 1910; studied summer 1909, with Madame Friedenburg, New York; Dean of Huron College School of Music, Huron, S. D., 1910-1912; present position since 1912.

**CHRISTY WILLIAM MICHEL, A. M., Professor of Botany.**

A. B., Litt. B., Ohio Wesleyan University, 1904; A. M., Harvard University, 1912; elected Austin Scholar in Botany, Graduate School, Harvard University, 1911, and Scholar in Yale University, for the same year; received appointment as assistant in Botany, Harvard University, 1912, and Fellow in Botany in the University of Wisconsin; student Harvard University, second semester of 1905-06 and the year of 1911-12; Ohio State University, 1908-09; Supt. of Schools, Mercer, Ohio, 1904-05; Prof. Biology, Defiance College, 1906-1908 and 1909-1911; present position since 1912.



**HARRY W. EWING, Professor of Physical Education.**

Student University of Nebraska, Academic Courses, 1904-1907; Assistant Coach, University of Nebraska, 1910-1911; Director of Athletics, Morningside College, 1911-1912; present position since 1912.

**ALBERT JONES WILLIS, C. E., Professor of Civil Engineering.**

C. E., Lehigh University, 1905; Asst. Engineer of Construction and Repair, Bethlehem Steel Co., 1905-1906; Instructor in Civil Engineering, Lehigh University, 1906-1908; Instructor in Civil Engineering, Armour Institute of Technology, 1908-1910; Structural Draftsman with C. M. & St. P. R. R., summer of 1909; Structural Steel Draftsman and Checker with the Guerber Engineering Co., summers of 1910, 1911, 1912, 1914; Instructor in Civil Engineering, Cooper Union, New York City, 1910-1913; in charge of property survey and laying out of public roads in Cambria County, Pa., summer of 1913; Assoc. M. Am. Soc. C. E.; present position since 1913.

**BELLA SPENCER, A. B., Professor of Modern Languages.**

A. B., Kansas State Univ., 1899; student of Prof. Heine, Univ. Goettingen, Germany, 1898-1899; Student of Prof. Schweizer-Siedler and Dr. Tobler, Univ. of Zurich, Zurich, Switzerland, 1899-1904; Instructor in Modern Language, City High School, Portland, Oregon, 1904-1905; Instructor in Modern Language, LaSalle-Peru Township High School, LaSalle, Ill.; present position since 1913.

**CHARLES CLINTON LIPP, D. V. M., Professor of Veterinary Medicine; Veterinarian of Experiment Station.**

Student Poland Union Seminary, North Eastern Ohio Normal College; D. V. M., Ohio State University, College of Veterinary Medicine; present position since 1913.

**ERNEST D. STIVERS, B. S., Professor Secondary Agricultural Education; Director of Summer School.**

B. S., Iowa State College, 1901; Science Teacher, High School, Mason City, Ia., 1901-1904; Superintendent of Schools, Parker, S. D., 1904-1910; student special work in Agriculture, Iowa State College, 1910-1911; Principal of Agricultural High School, Prescott, Arkansas, 1911-1912; Agricultural Editor, International Correspondence Schools, Scranton, Pa., 1912-1913; present position since 1913.

**CHAS. F. SCHLATTER, B. S., Professor of Commercial Science.**

B. S., Southern Iowa Normal, 1902; Instructor in Mathematics, Southern Iowa Normal, 1904-1905; Instructor in Pedagogy, Southern Iowa Normal, summer quarter, 1905; graduate Gem City Business College, 1906; student Drake University, summer quarters, 1909 and



1910; Superintendent of Schools, Dunlap, Illinois, 1906-1907, 1907-1908 and 1908-1909; Instructor in Commerce, Sioux City High School, 1909-1910; Principal Department of Commerce, La Salle-Peru Township High School, La Salle, Illinois, 1910-1911; present position since 1911.

**FRANK EMERSON BROWN, A. M., Professor of Public Speaking.**

A. B., Knox College, 1902; A. M., Knox College, 1908; Illinois Representative Interstate Oratorical Contest, St. Paul, 1902; student, Emerson College of Oratory, Boston, 1902-1903; student, University of Chicago, Summer School, 1908; Instructor in English and Oratory, Mercersburg Academy, Mercersburg, Pennsylvania, 1903-1905; Professor of Public Speaking, Drake University, 1905-1914; present position since 1914.

**R. C. DITTO, Second Lieutenant 20th Infantry, U. S. Army, Professor of Military Science and Tactics.**

Mercersburg Academy, 1903; post graduate, 1904; Lafayette College, 1904-1905; Army, 1907—; Philippine Islands, 1910-1912; present position since 1914.

**STEPHEN DECATUR van BENTHUYSEN, A. M., Professor of Rural Economics and Sociology.**

Graduate of the Central Normal College and Business Institute, Great Bend, Kansas, 1893; A. M. University of Puget Sound, 1912; Instructor Business Department, Academy, Appleton City, Mo., 1893-1896; principal Business Department, College, Rich Hill, Mo., 1896-1899; Principal School of Commerce, Grand Prairie Seminary, Onarga, Illinois, 1899-1906; Special Study, School of Commerce and Administration, University of Chicago, 1905; Dean of the School of Commerce, Dakota Wesleyan University, 1906-1915; present position since 1915.

**CHARLES HARVEY BRADY, A. M.**

B. S., Indiana Tri-State College, 1902; A. B., University of Indiana, 1907; Scholar in Education and Psychology, Graduate School, University of Indiana, 1908; A. M., Columbia University, 1912; Scholar in Education, graduate School, Columbia University, 1914-1915; Principal Consolidated Agricultural High School, Indiana, 1900-1906; Principal High School, Bloomfield, Indiana, 1907-1908; Principal High School, Wabash, Indiana, 1908-1911; Professor of Education, State Teachers' College, Colorado, 1912-1914; Director Secondary Education, University of Indiana, summer school (12 wks.) 1914; present position since 1915.

**JOSEPH GLADDEN HUTTON, B. S., M. S., Associate Professor of Agronomy.**

Graduate of Indiana State Normal School, Terre Haute, 1899; S. B., University of Chicago, 1908; M. S., University of Illinois, 1910; Teacher in Indiana District Schools, 1891-1895; Assistant in Biological Laboratory, Indiana State Normal School, 1898-1899; Instructor in Physiology, Indiana State Normal School, 1899-1900; Curator's Assistant, Marine Biological Laboratory, Wood's Hole, Mass., summer, 1901; Principal of Beardstown (Ill.) High School, 1901-1903; Superintendent of Schools, Beardstown (Ill.), 1903-1908; Instructor in Psychology, Indiana State Normal School, summer, 1908; Assistant in Geology and Graduate School in Botany, Geology and Soils, University of Illinois, 1908-1911; Field Assistant, Illinois State Geological Survey, summer, 1909; present position since 1911.

**B. A. DUNBAR, A. M., Associate Professor of Chemistry.**

A. B., Ohio Wesleyan University, 1891; A. M., Ohio Wesleyan University, 1892; Instructor in Mathematics and Physics, Hillsboro Normal College, Hillsboro, Ohio, 1891-1893; Instructor in Physics, High School, Ironton, Ohio, 1893-1895; Supt. of Schools, Michigan, Wyoming, Minnesota and North Dakota, 1895-1910; student in Chemistry, University of Chicago, 1909-1910; Assistant Professor of Chemistry, South Dakota State College, 1911-1912; present position since 1912.

**BENJAMIN LEE THOMPSON, B. Sc., Associate Professor of Animal Husbandry.**

B. Sc. in Agriculture, Ohio State University, 1908; Professor of Animal Husbandry and Dairying, Dunn County School of Agriculture, Menomonie, Wis., 1908-1909; Instructor in Animal Husbandry, South Dakota State College, 1909-1912; present position since 1912.

**HOWARD H. HOY, B. S., M. S., Associate Professor of Physics and Mechanical Engineering.**

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; pursued special work in electrical engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; Instructor in Physics and Electrical Engineering, 1904-1914; Assistant Professor in same departments, 1914-1915; present position since 1915.

**W. ALBERT PETERSON, Mus. Bac., Assistant Professor of Music.**

Qualified as teacher, Illinois Wesleyan Conservatory, 1901; graduate American Conservatory, Chicago, 1909; post-graduate same institution, 1911; pupil of Allen Spencer, pianist, and Adolph Weidig and Geo. Colburn, harmony, counter-point, composition, etc.; In-

structor, Huron College, Huron, S. D., 1911-1912; present position since 1912.

**MAUD GODDARD, Assistant Professor of Industrial Art.**

Student Art Institute, Chicago, 1903; student Summer Course, School of Fine Arts, Minneapolis, 1907; student Chautauqua summer school, N. Y., 1909; student Commonwealth Art School, Maine, summer of 1910; Instructor in Industrial Art, South Dakota State College, 1903-1914; present position since 1914.

**CARL CHRISTENSEN, Assistant Professor of Music, Violin and Other Instruments.**

Student under Professor Christian Madsen of Copenhagen, Denmark; also studied with C. F. Toenniges, of Davenport, Iowa, 1900-1901; with Alfred Speil, Minneapolis, 1908-1909; and with William McPhail, Minneapolis, summer of 1912; Instructor in Music, South Dakota State College, 1906-1914; present position since 1914.

**GERTRUDE S. YOUNG, A. B., Assistant Professor of English and History.**

A. B., University of Wisconsin, 1906; Instructor in History and English, South Dakota State College, 1907-1914; present position since 1914.

**MANLEY CHAMPLIN, B. S., M. S., Assistant Professor in Agronomy.**

B. S., South Dakota State College, 1909; M. S., same institution, 1914; Special Agent, 1909; Scientific Assistant, 1910; Collaborator, since 1914.  
United States Department of Agriculture, 1911; Assistant in Agronomy, South Dakota State College, 1911-1914; present position since 1914.

**CLIFFORD N. MILLS, B. S., A. M., Assistant Professor of Mathematics.**

B. S., Franklin College, Indiana, 1910; Graduate Student Indiana University, summers 1910-12; Fellow, Indiana University, 1913-14; A. M., Indiana University, 1915; Teacher Public School Jennings Co., Indiana, 1904-05; Instructor Math. Franklin H. S., Indiana, 1908-10; Tutor Math. Franklin College, Indiana, 1908; Prof. of Math. Highland College, Kansas, 1910-13; Instructor in Mathematics, South Dakota State College, 1913-1914; present position since 1914.

**JOHN A. BONELL, Assistant Professor of Mechanical Engineering.**

Student Stout Institute, 1904, and State Normal School, Oshkosh, Wis., summer 1905; Assistant and Instructor in Farm Mechanics, Marathon County School of Agriculture, Wausau, Wis.,

1905-1910; attended Stout Institute, summer 1910; Instructor in Shopwork, South Dakota State College, 1910-1915; present position since 1915.

**WILLIAM MONROE MAIR**, Superintendent of Boys' and Girls' Clubs, Extension Division.

Studied three years in Oberlin College and Theological Seminary; traveled in Europe one year; Principal of the Public Schools of Garretson two and a half years; County Superintendent of Schools in Minnehaha County, four years; present position since 1913.

**WARD A. OSTRANDER**, B. S., M. S., District Agricultural Agent, Extension Division.

B. S., Lawrence College, 1911; M. S., University of Wisconsin, 1914; present position since 1914.

**GUY MORRISON**, B. S., District Agricultural Agent, Extension Division.

B. S., South Dakota State College; present position since 1914.

**H. H. STONER**, M. D., Superintendent of Short Courses, Extension Division.

M. D., St. Joseph Medical College, 1885; Superintendent of Farmers Institutes, 1911-1915; present position since 1915.

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## Instructors and Assistants

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**HOWARD LOOMIS**, A. B., Assistant in Agronomy.

A. B., Albion College, 1909; Instructor Chemistry and Physics, Union City, Ind., High School, 1909-1910; present position since 1910.

**GUY E. YOUNGBERG**, B. S., M. S., Assistant in Chemistry.

B. S., 1906; Ph. G., 1908, and M. S., 1909, South Dakota State College; present position since 1910.

**HOWARD W. GREGORY**, B. S., Assistant in Dairy Husbandry.

B. S. in Dairying, Oklahoma Agricultural and Mechanical College, 1912; present position since 1912.

**LAURA FERGUSON**, Instructor in Music.

Studied four years with Robert Boice Carson, of Chicago; Graduate of Carson School of Music, Portland, Oregon, 1911; Solo Soprano White Temple Baptist Church, Portland, 1910; Solo Soprano Grace M. E. Church, Portland, 1911-12; taught privately in Minne-



apolis, 1912-1913; Soprano Soloist, Westminster Presbyterian Church, Minneapolis, 1912-13; present position since 1913.

**RUTH ALINE WOOD, B. S., Instructor in Home Economics.**

B. S., South Dakota State College, 1913; present position since 1913.

**NELLIE G. KENDALL, B. S., Instructor in English.**

B. S., South Dakota State College, 1908; post-graduate student South Dakota State College, 1909; graduate of Cumnoek School of Oratory, 1911; present position since 1912.

**GRACE A. REVELL, B. S., Instructor in Mathematics.**

B. S., South Dakota State College, 1912; post-graduate student, South Dakota State College, 1912-1913; present position since 1913.

**EDWARD BINNEWIES, B. S., M. S., Instructor in Chemistry.**

B. S., South Dakota State College, 1913; M. S., same institution, 1915; present position since 1913.

**MATTHEW FOWLDS, B. S., Assistant in Agronomy.**

B. S., South Dakota State College, 1913; Assistant in Entomology, South Dakota State College, 1913-1914; present position since 1914.

**GEORGE PHILLIPS, Student Adviser.**

B. S., South Dakota State College, 1909; Scholar in University of Wisconsin, 1910-1911; Instructor in Mechanical Engineering, South Dakota State College, 1912-1914; present position since 1914.

**GRACE V. SOMERS, B. S., Instructor in Home Economics.**

B. S., South Dakota State College, 1913; present position since 1914.

**CECILE IRENE WELCH, Instructor in Music.**

Graduate of Music Department S. D. S. C., 1908; B. S. Degree S. D. S. C., 1910; Instructor in Piano, S. D. S. C., 1911-1912; studied piano and pipe organ at New England Conservatory, Boston, Massachusetts, 1912-1913; present position since 1914.

**HARRY RILLING, B. S., Assistant in Agronomy.**

B. S., South Dakota State College, 1913; present position since 1914.

**FRED C. STOLTENBERG, Florist and Assistant in Horticulture.**

Present position since 1906.



**REGINALD SHERWOOD, B. S., Assistant in Chemistry.**

B. S., South Dakota State College, 1914; present position since 1914.

**DILLA E. WIMPLE, B. A., M. A., Instructor in German.**

B. A., University of South Dakota, 1904; M. A., University of South Dakota, 1906; student at Berlitz School of Modern Languages, Chicago, summer session, 1904; Instructor in German, University of South Dakota, 1904-1907; Teacher of rural schools, 1908-1909; Principal of High School, Harrisburg, S. D., 1909-10; County Superintendent of Schools, Lincoln County, S. D., 1911-1914; present position since 1914.

**CHARLOTTE ELLIOTT, B. A., M. A., Instructor in Botany.**

B. A., Leland Stanford Junior University, 1907; Assistant in High School, Flandreau, S. D., 1907-1908; Instructor in Biology and Geography, State Normal School, Spearfish, S. D., 1908-1912; post-graduate work Leland Stanford Junior University, 1912-1913; M. A., 1913; present position since 1914.

**VEY VALENTINE, B. S., Assistant in Hog Cholera Demonstration Work.**

B. S., South Dakota State College, 1914; Assistant in hog cholera demonstration work of College in Co-operation with U. S. Dept. of Agriculture in Davison County since 1914.

**EDWIN H. HUNGERFORD, M. S., Assistant in Dairy Husbandry.**

Graduate Kansas State Agricultural College, 1912; Graduate Assistant in Chemistry, 1912-1913; Fellow in Chemistry, 1913-1914; Master of Science in Chemistry, Kansas State Agricultural College, 1914; present position since 1914.

**DAVID B. STEFFENS, Instructor in Mechanical Economics.**

Student State Normal School, Winona, Minnesota, 1912-1913; graduate of the Stout Institute, 1914; student University of Wisconsin, summer 1914; present position since 1914.

**GENEVIEVE HARTGERING, Instructor in Home Economics.**

Student Teachers' College, Columbia University, 1914; Special Domestic Art Teacher in Minneapolis Public School, 1913-1914; Instructor in Millinery in Evening Schools, Minneapolis, 1913-1914; Instructor in Domestic Art in Vacation Schools, Minneapolis, 1914; present position since 1914.

**GEORGE GILBERTSON, B. S., Assistant in Entomology.**

B. S., South Dakota State College, 1914; present position since 1914.

**HELEN FERGUSON, Assistant in Music.**

Graduate in Public School Music, McAlester College, 1914; present position since 1914.

**WILSON CRAMER, JR., Instructor in Animal Husbandry.**

Present position since 1914.

**VERN R. JONES, B. S., M. S. A., Instructor in Dairy Husbandry.**

Assistant Dairyman, Washington State College, 1911-1912; B. S. in Dairying, same college 1912; Instructor in Dairying, same college, 1912-1913; Assistant in Dairy Husbandry, Cornell University, 1913-1915; M. S. A., Cornell University, 1915; present position since 1915.

**ARTHUR LYNCH, B. S., Assistant in Dairy Husbandry.**

B. S., South Dakota State College, 1915; present position since 1915.

**JENS BOLLAND, B. S., Instructor in Animal Husbandry.**

B. S., South Dakota State College, 1915; present position since 1915.

**GERTRUDE STEDMAN, Instructor in the School of Agriculture.**

Present position since 1915.

**T. A. MEEHAN, Specialist in Dairying, Extension Division.**

Present position since 1915.

**HENRIETTA SMITH, Instructor in Violin.**

Present position since 1915.

**AGNES LEONORE HALLAND, B. S., Instructor in Home Economics.**

B. S. in Home Economics, North Dakota State Agr. College, 1911; Instructor and Extension Lecturer, Minnesota State Agricultural High School and Normal, McIntosh, Minn., 1911-1913; Supervisor of Home Economics, Public Schools, Lewiston, Idaho, 1913-1914; Supervisor of Home Economics, Public Schools, Bemidji, Minn., and Extension Lecturer in Home Economics, Beltrami County, Minn., 1914-1915; present position since 1916.

## Special Lecturers

In addition to the regular members of the faculty, the following persons have given special lectures and addresses before the students and faculty of the State College during the year:

Hon. George Carroll, Miller.

Regent J. W. Campbell, Huron

Hon. J. W. Parmley, Ipswich

Hon. Chas. McCaffree, Pierre.

Hon. Theodore E. Burton, Ohio.

Hon. James Wilson, Traer, Iowa.

Mr. Raymond Robins, Chicago.

Regent T. W. Dwight, Sioux Falls.

Hon. Thomas Sterling, U. S. Senator of So. Dak., Wash., D. C.

Dr. F. N. Seerley, Springfield, Mass.

Hon. Nathan C. Schaeffer, Harrisburg, Pa.

Rev. Wm. H. Talmadge, Flandreau.

Regent A. M. Anderson, Sturgis.

Dr. W. K. Weaver, Douglas, Wyoming.

Rev. Paul Roberts, Brookings.

Regent Frank Anderson, Webster.

Dr. Wentworth Stewart, Boston, Mass.

Pres. W. E. Johnson, Aberdeen.

Regent August Frieberg, Beresford.

Judge Carl Sherwood, Brookings.

Hon. I. D. Aldrich, Big Stone.

Hon. H. B. Fuller, Washington, D. C.

Dr. J. S. Harkness, Aberdeen.

Miss Norma Kidd, Y. W. C. A. Secy., Lincoln, Nebr.

Miss Margaret McConnell, Y. W. C. A. Secy., Minneapolis, Minn.

Mr. Howard T. Beaver, Y. M. C. A. Secy., Kankakee, Ill.

Mr. R. H. Edwards, Y. M. C. A. Secy., New York City.

The above list does not include the speakers upon the regular Y. M. C. A. lecture course.

## Other Officers and Employees

R. A. Larson.....	Secretary
Robert Elliott.....	Registrar
Edith Hubbard.....	Assistant Librarian
Nina A. Waters.....	Matron of Dormitory
Max Mahany.....	Secretary to the President
George E. Purdy.....	Custodian of Buildings and Grounds
A. T. Larson.....	Engineer

## Faculty Committees

Faculty Committees will be announced at the beginning of the college year.

# General Information

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## HISTORICAL SKETCH.

**Establishment.**—An act of the Territorial Legislature approved February 21, 1881, provided that “an Agricultural College for the Territory of Dakota be established at Brookings, \* \* \* \* provided that a tract of land of not less than eighty acres be secured and donated to the Territory of Dakota.”

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was opened for use September 24, 1884.

The Enabling Act admitting the state of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the agricultural college, as provided in the acts of congress making donations of lands for such purpose. The acts of congress here referred to are, primarily, the act of July 2, 1862, known as the Morrill Act, providing that 30,000 acres of public land for each representative in congress be given to each state towards “the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts.”

By the Enabling Act of 1889 Congress granted to South Dakota for the Agricultural College 40,000 additional acres, in lieu of a grant that had been made to new states in 1841. Thus the total land grant for the Agricultural College was 160,000 acres.

In the Morrill Act of 1862, such colleges were spoken of as “Colleges of Agriculture and Mechanic Arts.” In order that the name might more nearly conform to the object for which the College was established, the legislature of 1907 changed the name from “The Agricultural College of South

Dakota'' to ''The State College of Agriculture and Mechanic Arts.''

The \*Experiment Station was organized in 1887 under the Hatch Act of Congress, which provided for the establishment of agricultural experiment stations in connection with agricultural colleges. These stations were established for the purpose of conducting experiments and research work in connection with all branches of the agricultural industries of the United States, due regard being paid to the varying conditions and needs of the respective states. It is also their object to aid in diffusing among the people useful and practical information on all subjects connected with agriculture. The South Dakota Station conducts its investigations chiefly along the following lines: live stock, veterinary science, soils, field experiments, greenhouse work, trees and small fruits, and chemistry of plant growth and foods.

The \*Extension Division was established to carry to the people of the state the results of the work of the College. From its earliest history the College has sent out members of its staff to help the people of the state by addressing meetings, acting as judges at fairs and for agricultural clubs, and in various other ways. The College, however, had no money available to conduct such work in a systematic way until recently. In May, 1914, the Smith-Lever Act was passed by Congress providing \$10,000 annually to each state beginning with July 1, 1914, to be used for agricultural extension work by the State Colleges of Agriculture in co-operation with the United States Department of Agriculture. The act also provides that beginning with July 1, 1915, additional amounts which increase from year to year are to be given to the different states upon the condition that the states appropriate equal amounts to be used in connection with the national fund for extension work.

**Sources of Income.**—A joint resolution passed by the legislature of 1890 accepted the lands granted in the enabling act. These lands were not at once assigned. The commissioner of

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\*See the index for references to additional information concerning the Agricultural Experiment Station and the Extension Division.



Public Lands reported that 64,658 acres had been selected. All have since been selected; very few have been sold. A small amount is received yearly as rental. The first income recorded was \$1,197.71, September 1, 1896. As no school lands may be sold for less than ten dollars an acre, these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will probably be sufficient for the needs of the college.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved by Congress March 4, 1907, provides for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of \$5,000 for the year 1907-1908, which increased \$5,000 each year until it reached \$25,000 per annum. The College, therefore, receives \$50,000 annually from the National Government for instructional purposes.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

The Hatch Act provides that the experiment stations should receive \$15,000 annually from the National Government. This amount has been increased by the provisions of the Adams Act of 1906, so that the experiment station now receives \$30,000 a year for maintenance.

Under the Smith-Lever Act the College receives \$10,000 annually from the National Government for extension work. Under the same act during each of the two years of the present biennium the College receives \$6,167 and \$11,308 respectively on the condition that equal amounts are provided by the state to be used with the national funds. The State Legisla-

tures of 1915 has appropriated \$25,000 and \$30,000 respectively for each of the next two years to meet this condition and for additional extension work in the State.

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### LOCATION, BUILDINGS AND EQUIPMENT

**The Location.**—The College is located upon an eminence one mile from the business center of Brookings, which has a population of about three thousand five hundred people. The city is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch making connection with the main line at this point.

Brookings is almost an ideal college town. It is lighted by electricity and has a complete water and sewer system. Its streets are lined with trees and its houses have well kept lawns abounding in ornamental shrubs and plants.

It is a city of clean morals. No saloon has been allowed within its limits for years; and the last few times when the question of allowing saloons within the city has been submitted to a vote of the people, it has been defeated by overwhelming majorities.

**The College Buildings and Grounds.**—The college campus upon and about which the college buildings are placed is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary walks and drives. Adjoining on the rear are the horticultural gardens, and to the north and northwest is the college farm.

The oldest building on the campus, called the Central Building, was erected in 1884. This and the other two old buildings, called, during recent years, the North Building and the Experiment Station Building, will in the future be given over to general class room and laboratory purposes.

The Agricultural and Administration Building provides executive offices, an auditorium, laboratories, class rooms and offices for the various agricultural departments.

The Physics-Engineering Building is occupied by the physics and the engineering departments with their various class rooms, laboratories and shops.

The Plant Breeding Building, together with the large

Greenhouse, furnishes room for the work that is being conducted by the departments of botany, horticulture and entomology.

The Chemistry-Pharmacy Building, a two-story structure, is occupied by the class rooms and laboratories of those departments.

The Creamery is a two-story building which was almost doubled in size in 1911 by an addition which was made to meet the growing demands upon this department.

The Gymnasium is a two-story building that is used for athletic exercises and military drill during the season when such work cannot be carried on outdoors. In connection with the Gymnasium a tract of land near the campus has been fitted up for outdoor exercises and sports.

Wenona Hall, a splendid brick dormitory for young ladies, stands on a site just across the street from the campus.

The legislature of 1915 appropriated \$75,000 for a new dormitory for young ladies. This building is now in process of erection.

The central heating and electric light plant occupies a brick structure in the rear of the campus. The buildings are all heated by steam and lighted by electricity generated in this plant.

Near the campus on the adjoining college farm are located the agricultural and the dairy barns, together with a number of smaller buildings which are devoted to agricultural purposes.

**The Farm and Horticultural Gardens.**—The college farm includes four hundred and sixty acres, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the students may witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work in experiments involving the best farming practices for this region are given the students.

The Horticultural Gardens comprise about fifty acres adjoining the campus. Here and in the Greenhouse a large

amount of work in fruit propagation and plant experimentation is being carried on.

**The Laboratories, Shops and Museums.**—Well fitted laboratories and shops have been provided in all those departments where their use is made necessary by modern educational methods. The value of illustrative materials has been recognized, and numerous departments have made large collections and museums. The equipment of the various departments is described in connection with their work.

**The Library and Reading Room.**—The library, occupying rooms on the first floor of the Central Building, contains over 16,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

**The Postal Facilities.**—The College furnishes first-class postal facilities, the mail of the student being delivered at the college at convenient times during the day, making it unnecessary for them to walk to the city postoffice.

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## ORGANIZATION AND GOVERNMENT

**The Board of Regents.**—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who have charge of all of the educational institutions which are maintained either whol-



ly or in part by the state. The terms of office of the regents are each six years and expire at different times, so that the board is a continuous body. Appointments to the board are made by the Governor, with the approval of the senate, "of persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education."

Among the powers and duties of the regents as defined by law some important ones are, to employ members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

**The Faculty.**—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. The president appoints, at the beginning of each college year, certain faculty committees which take up such work as may be assigned them by the president and faculty.

In the government of the College the faculty rely chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly and maintain good behavior at all times. Students are not only under the direct supervision of the faculty while on the campus, but are responsible for their conduct wherever they may be.



In order that the work of the College may be rendered as efficient as possible and all relations made harmonious, a set of regulations, chiefly governing matters of classification, has been adopted by the faculty. No set rules are expected to cover every condition that arises, and all students should recognize the importance of co-operation with the faculty in their efforts to make college life helpful to the student body as a whole.

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### STUDENT ACTIVITIES

**Faculty Control.**—While the students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical, social and other activities, the faculty retains an advisory interest in all such matters, and has the right at any time to pass reasonable regulations for the welfare of the College.

**The Student Association.**—The athletic, debating and oratorical interests, and the student publication, the *Industrial Collegian*, are under the control of the Student Association, which governs these activities by means of a board of control, consisting of students and members of the faculty. This board is organized into the Athletic, the *Collegian*, and the Debating Councils, each of which directs the respective interests that come under it. A fee of three dollars a semester, or proportional sums for students whose work is arranged in terms shorter than the semester, is charged for membership, which admits the holder to all student exercises under the supervision of the association and pays for a subscription to the *Collegian*.

**Athletics.**—Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the State Meet once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

**Oratory and Debating.**—Each year for a number of years representatives of the college have met students from other

institutions in debating contests. The members of the local teams are chosen in a series of preliminary contests in which all are encouraged to take part. There has thus been aroused among the student body a large interest in this kind of work and a healthy rivalry to obtain places on the intercollegiate teams.

Credit for three hours work during one semester is given those who take part in an intercollegiate debate.

A. representative of the college is sent each year to the inter-collegiate oratorical contest of the state. This student is selected by means of a local preliminary contest. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

In order further to encourage students to enter into these activities, the First National Bank of Brookings, the Farmers' National Bank and the Bank of Brookings have very generously offered cash prizes to be awarded to students who excel along the various lines of forensic work.

**The Student Publications.**—The Industrial Collegian is a weekly paper published by the students of the College. It is intended to be a mirror of student life at this institution, and all phases of college activity have representatives on its staff of editors.

The Jack Rabbit is published annually by the junior class, and is a good representative and exponent of college life.

**The Literary Societies.**—The literary society is an important factor in the education of the student and all are strongly advised to take part in this kind of work. All preparatory students are expected to become members of the Franklin Society whose work is carried on under the supervision of the preparatory department, and is a preparation for the college societies.

The faculty and various citizens, recognizing the value of literary society work, have contributed several trophies to be competed for by the Athenian and Miltonian Societies, which are composed of students of collegiate standing.

**The Christian Associations.**—In the state schools the Young Men's and Young Women's Christian Associations oc-

cupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student who stands for pure manhood and womanhood to affiliate himself or herself with them. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among the members of the student body. The Young Men's Christian Association is personally supervised by a secretary who is engaged to spend a large part of his time in directing this work. The Young Women's Christian Association is supervised by the state and international college secretaries.

**Other Student Organizations.**—Among these may be mentioned the Art Club which encourages interest in art by bringing exhibits to the College and in various other ways; the Glee Club, which often makes tours in the state; the Dramatic Club, which makes a study of some of the best dramatic literature, and presents a play each year; and the Agricultural Club, the Engineering Club, the Pharmacy Club and other organizations.

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## STUDENT EXPENSES

**Tuition and Other Fees.**—The tuition for regular work extending throughout the college year is six dollars per semester, or twelve dollars per year. For information concerning tuition fees for work that is not arranged according to semesters, see the respective courses. A student who enrolls must pay the full tuition for the semester or term. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which the student takes work. Books and other supplies are furnished by the student.

As an inducement to students to register promptly the Regents have imposed the rule that a tardy enrollment fee of twenty-five cents per day shall be collected of all students who enroll subsequent to the regular day announced for that purpose. However in no case shall the tardy enrollment fee exceed one dollar and fifty cents.

Special fees are charged for instruction in music in the College. (See the department of music.)

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

**Estimate of Expenses.**—An estimate of the yearly expenses of a student is as follows:

Board and Room.....	\$200.00
Tuition .....	12.00
Fees in Student Association.....	6.00
Laboratory fees .....	10.00
Books and Supplies.....	25.00
Laundry Expenses .....	20.00
Incidentals .....	25.00
	<hr/>
	\$298.00

Men students are expected to purchase military uniforms which range in cost from \$16.00 to \$18.00.

While the above is considered as a reasonable estimate, many students go through the year on a less amount. Much depends upon the character of the student and the work he is taking.

**Board and Rooms.**—Good rooms and board can be obtained at private houses. A boarding club conducted in connection with the college furnishes board to the young men at a low cost, and the dormitory provides a large number of the young ladies with comfortable homes at reasonable rates. (See the following page for dormitory regulations.)

Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students. A list of approved available places for boarding or rooming can be obtained at any time from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations. If prospective students will write to the Young Men's or Young Women's Christian Association of the College, officers of these organizations will be glad to arrange to meet them at the train and help them to secure boarding and rooming places.



**The Ladies' Dormitory.**—This building is 120 by 50 feet in dimensions and three stories in height. In addition to the preceptress and other lady teachers, the matron and servants, it will provide a home for sixty women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room, while on the third floor is a recreation hall suitable for parties and plays which are attended by girls only. Two bath rooms, toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet, and a stationary wash stand with hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. The building is heated with steam, lighted by electricity, and in every respect has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattresses and pillows, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club is conducted under the supervision of an experienced matron. Every effort is made to provide wholesome fare at minimum cost to the students. The cost of table board during the last two years has been about \$3.00 a week. Payment for board at the rate of \$3.00 per week must be made for four weeks in advance. No deduction for board will be made for less than a week's absence.

The cost of rooms in the hall is \$13.50 per semester for each occupant, two in a room. This fee includes both light and heat. The room rent is payable in advance. The occupants will be expected to take care of their own room.

A student desiring room reserved for her must forward \$2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded.



**Student Labor.**—There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the College authorities to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college.

**Scholarships.**—The following articles from the law, defining powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution. The student must present his appointment to the secretary of the College at the time of enrollment in order to obtain credit for the same.

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## ENTRANCE REQUIREMENTS

**Admission.**—While students are admitted at any time and assigned to such classes as they are found best fitted to enter, it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters later he will not under any condition be allowed to hold a class back. See paragraph concerning tuition for statement concerning tardy enrollment fee. If a tardy beginning is imperative the student must arrange with a tutor for assistance in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

Candidates for admission to any department of the College must be at least fourteen years of age and of good moral character.

Credit in the College may be obtained by presenting certified grades from other institutions of reputable standing or through examination. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subject for which he has received credit.

The College will furnish prospective students with application blanks, which, after being filled out with certified standings and other data, should be returned to the registrar.

The first two days of the first semester are devoted to the registration of students. All students should complete their registration at this time and new students must present their credits at or before this time if they expect to be assigned a proper classification.

**Entrance Credits.**—For admission to the four-year courses leading to the degree of Bachelor of Science, and the two-year course in Pharmacy the student should present credit for fifteen units of high school or other secondary school work. A unit is a subject which is taught five periods a week throughout the school year, or the equivalent of this work. Of the fifteen units required, some are prescribed, the remaining units being in optional subjects as indicated in the table below. A student who has graduated from a creditable high school course of four years will in general be enrolled as a member of the freshman class, but in case the prescribed subjects have not been completed, he may be required to bring up this back work.

A student may be admitted to a college class without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

For the benefit of students who are unable to attend a high school to complete the preparatory requirements, a preparatory course is maintained. Students will not be admitted to this department unless they present evidences that they have completed the work of the public schools as far as the ninth grade. For the preparatory course, see the Preparatory Department.

The list of prescribed and optional subjects are as follows:

### Prescribed Units

English, three units in advance of grammar. These should consist of composition work and a study of some of the simpler American and English classics.

Algebra, one and one-half units for engineering students, one unit for others. The fundamental operations, factoring, fractions, simple equations, involution, evolution, radicals, quadratic equations and the analysis and solutions of problems involving these principles.

Plane Geometry, one unit. The completion of plane geometry. Special emphasis should be paid to the solutions of original problems and constructions. Students of engineering who have not completed solid geometry in the high school will be required to take the subject in the freshman year of the college course.

Elementary Physics, one unit. One year's work covering the science as presented in the best text books. Laboratory work should accompany the text book work.

History, one and one-half units. This work should follow, and not include, elementary United States History, and should be a connected study of some of the following lines: ancient, medieval, modern, English, American history.

Civics, one-half unit. A study of the constitutions of the United States and of the state, as presented in the best high schools.

Foreign Language, two units. These credits should be for two years' work in some one of the languages, German, French or Latin. In case a student is a graduate of a four-year high school course which does not include any foreign language, he may present other entrance credits in place of these two units, but must take foreign language in the freshman and sophomore years if such work is required in the course which he wishes to pursue.

### Optional Units

The three and one-half optional units may be offered in the same lines of work as the prescribed units and in other

departments, as indicated by the table below. About the only requirement made concerning the work for which credit is offered is that it should be of a reasonably high standard. The maximum credit that is allowed in each subject is indicated in the table. While no minimum is stated it is expected that a student shall have covered a reasonable amount of a subject before being given any credit in it.

**TABLE OF ENTRANCE REQUIREMENTS.**

	Prescribed Units	Maximum Allowed
English .....	3	3
*Algebra, thru quadratics .....	1	2
Plane Geometry .....	1	1
Elementary Physics .....	1	1
History, following elementary U. S. History	1½	3
*Foreign Language, German, French or Latin	2	4
Civics .....	½	½
Science—		
Agriculture .....		1
Physiology, following Biology, Zoology or Botany .....		½
Botany .....		1
General Biology .....		1
Zoology .....		1
Geology .....		½
Physical Geography .....		½
Bookkeeping .....		½
Commercial Geography .....		½
Freehand Drawing .....		½
Manual Training, including Mechanical Drawing .....		1
Cooking .....		½
Sewing .....		½
*Solid Geometry .....		½

\*See above for exceptions as to algebra, solid geometry and foreign language.

## STUDIES

**Credits.**—Credit for college work is counted in credit hours. A credit hour is one hour of class or lecture work requiring an additional hour and a half in preparation. Two and one-half hours in laboratory work is counted equivalent to one hour spent in the class room.



**Registration.**—In registering for work the student is advised by a member of the faculty who helps him to make out a consistent schedule of studies. In general, students are not allowed to classify in more than twenty or less than fourteen credit hours a week. The faculty recognize that, because of differences in subjects and in the ability of students, some are able to carry a larger number of hours than others, and endeavor to assign to each student enough work to keep him reasonably busy without overloading him.

**Special Students.**—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

**Military Requirements.**—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students taking regular work in the College are required to do certain work in this department, unless excused because of physical disability or some other grave reason. Certificates of disability should be obtained from the physician whom the College authorities have designated for such work, the College bearing the expense of the examination. For further regulations governing this work see the military department.

**Grades.**—All grades of students will hereafter be reported to the registrar by means of the letters, M, S, E, I, P, and F. The letter M means that the student's work is of medium or average grade. The letter S, meaning superior, indicates that the work is above the average, but is not as high as E, which means that the student's work is excellent or so high above the average as to merit special mention. The letter I means inferior or below the average, but is higher than P, meaning passed, which indicates that the student has only a sufficient knowledge to make it unprofitable for him to repeat the subject. The letter F means that the student has failed to receive a passing grade.

**Conditioned Students.**—Any student who without good reason has failed to receive a passing grade in a reasonable amount of his work will be registered only conditionally for further work. And if any student at any time is not carrying



the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

**Absences.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexcused absences as the faculty may deem proper. Should a student find it necessary to be late to his class he should make a satisfactory explanation to his instructor at the close of the period.

Extra credits will be required of students for absences from college duties, whether the absences are excused or not unless the students are absent officially representing the College. While the faculty will do all that is reasonably possible to assist students to bring up work which has been missed because of sickness or for other good reasons, they recognize the principle that even a good excuse should not stand in lieu of scholarship.

## DEGREES AND CERTIFICATES

**Degrees.**—The courses of study leading to degrees given by the College are as follows:

The two year course in Pharmacy, leading to the degree of Pharmacy Graduate. For additional work of two years leading to the degree of Bachelor of Science, see schedule of Pharmacy Course.

The four-year course in Agriculture, in which the student may specialize along the lines of animal husbandry, dairy husbandry, agronomy, horticulture and plant pathology. Upon the completion of one of these schemes, under the direction of the head of the department in which the group of electives is chosen, the student will receive the degree of Bachelor of Science.

The four-year course in Home Economics leading to the degree of Bachelor of Science.

The four-year courses in Mechanical, Electrical and Civil Engineering, leading to the degree of Bachelor of Science. In order to meet a constantly increasing demand for better equipped and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, Electrical Engineer, or Civil Engineer, will be conferred. This work, which is nearly all prescribed, is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The four-year course in General Science, leading to the degree of Bachelor of Science. The work of this course is largely elective and is planned to give the student a liberal education, at the same time permitting specialization in the sciences.

The degree of Master of Science is offered to students who have received the Bachelor's degree either from this institution or from other institutions of equal rank, and who in addition have completed at least one full year's resident work, i. e., forty credit hours, in advanced study and have shown a reasonable proficiency in such work. At least two-thirds of this work must be in some one line of study, called the major work. The scheme of study presented by the student for the degree must be prescribed by the faculty committee on advanced degrees, who will outline the work in consultation with the head of the department in which the major work is taken.

It should be understood that the work for this degree can not be subjected to rigid regulation, and that each case must be dealt with on its individual merits.

**Special Courses.**—The College also offers special courses in several important and practical lines of work. These are mentioned in other parts of the catalog under the proper headings, and are as follows:

The four-years course in the School of Agriculture.

The one-year secretarial course.

The five-months course in steam engineering.

The three-months creamery course.

Courses in vocal and instrumental music.

Special work in art.

The farm and home course, for farmers and farmers' wives.

**Courses of Study.**—The courses leading to the degree of Bachelor of Science and the degree of Pharmacy Graduate are outlined on the following pages. The conditions for entrance to these courses may be found under "Entrance Requirements." A department will not be required to give an elective unless at least five students are enrolled in the subject.

### \*AGRICULTURAL COURSE

#### Freshman Year

	Credits	
	1st Sem.	2nd Sem.
Rhetoric, English 9 & 10.....	3	3
El. Chemistry, Chemistry 1 & 2.....	4	4
Farm Crops, Agronomy 1.....	4	
Stock Judging, Animal Husbandry 1.....	3	
Military Tactics .....	1	1
German 1 & 2, or French 1 & 2, or Spanish 1 & 2	4	4
Farm Dairying Dairy Husbandry 1.....		3
Breeds of Live Stock, Animal Husbandry 2.....		3

#### Sophomore Year

General Botany, Botany 2 & 3 .....	4	4
Quantitative Chemistry, Chemistry 3 .....		3
Veterinary Anatomy, Veterinary 1 .....		2
Military Science, Military 1 .....		1
Military Tactics .....	1	1
Extempore Speaking, Public Speaking 3 .....	2	
German 3 & 4 or French 3 & 4, or Spanish 3 & 4	4	4
Organic Chemistry, Chemistry 4 .....	4	
General Entomology, Entomology 1 & 2 .....	2	3
General Horticulture, Horticulture 1 .....	2	2

### ANIMAL HUSBANDRY GROUP

#### Junior Year.

General Zoology, Zoology 3 & 4 .....	4	4
Psychology, Education 1 .....	3	
English Literature 17 & 18 .....	2	2
Animal Nutrition, Animal Husbandry 5 .....	3	
Soils, Agronomy 4 & 5 .....	4	4
Stock Feeding, Animal Husbandry 6 .....		3
Principles Animal Breeding, Animal Husbandry 4		3
Elective .....	3	2

Credits  
1st Sem. 2nd Sem.

### Senior Year

Economics, History 15 .....	3	
Adv. Stock Judging, Animal Husbandry 3 .....	2	
Veterinary Hygiene & Sanitation, Veterinary 2 .....	3	
Live Stock Production & Management, Animal Husbandry 7 .....		4
Agricultural Chemistry, Chemistry 6 .....		3
Rural Economics, History 18 .....		3
Prevention and Control of Infectious Diseases Veterinary 3 .....		3
Elective .....	10	5

### DAIRY HUSBANDRY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 .....	4	4
Soils, Agronomy 4 & 5 .....	4	4
Inspection & Testing Dairy Products, Dairy Husbandry 2 .....	4	
General Bacteriology, Zoology 10 .....	4	
English Literature, 17 & 18 .....	3	3
Dairy Bacteriology, Dairy Husbandry 3 .....		4
Dairy Technology, Dairy Husbandry 7 .....		4

#### Senior Year

Factory Operation, Dairy Husbandry 4 & 5 ....	4	4
Dairy Management, Dairy Husbandry 6 .....	3	
Economics, History 15 .....	3	
Psychology, Educational 1 .....	3	
Principles Animal Breeding, Animal Husbandry 4 .....		3
Rural Economics, History 18 .....		3
Veterinary Hygiene and Sanitation, Veterinary 2 .....	3	
Elective .....	3	8

\*Students expecting to teach should see Education Department.

### AGRONOMY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 .....	4	4
Soils, Agronomy 4 & 5 .....	4	4
Psychology, Education 1 .....	3	
Farm Crops, Agronomy 2 .....		4
English Literature, English 17 & 18 .....	3	3
Elective .....	5	4

#### Senior Year

Economics, History 15 .....	3
Geology, Agronomy 10 .....	5

	Credits	
	1st Sem.	2nd Sem.
Rural Economics, History 18 .....		3
Heredity, Botany 10 .....		3
Elective .....	10	10

### HORTICULTURE & PLANT PATHOLOGY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 .....	4	4
Soils, Agronomy 4 & 5 .....	4	4
English Literature, English 17 & 18 .....	3	3
Classification, Botany 7 .....	4	
Plant Materials, Horticulture 8 .....		1
Heredity, Botany 10 .....		3
Systematic Pomology, Horticulture 5 .....	1	
Plant Physiology, Botany 4 .....		4
Elective .....	4	

#### Senior Year

Economics, History 15 .....	3	
Psychology, Education 1 .....	3	
Forestry, Horticulture 4 .....	2	
Economic Entomology, Entomology 5 & 6 .....	3	3
Industrial Publicity, Commerce 14 .....	2	
Architectural Drawing, Mechanical Engineering 6 .....	3	
Nursery Management, Horticulture 9 & 10 .....	4	4
Landscape Gardening, Horticulture 6 .....		4
Rural Economics, History 18 .....		3
Sociology, History 16 .....		3
Experimental Horticulture, Horticulture 11 ....		2

Note: **Credits for Practical Work.**—Students in Horticulture are required before graduation to do 6 months' practical work outside of the school year in some Horticultural establishment. If more than 6 months' work is done, college credit will be given to the extent of 2 hours for one semester for each 3 months of work. A written report of this outside work is required.

If possible, Trigonometry and Surveying should be included in the freshman year to prepare for Landscape Gardening.

### \*HOME ECONOMICS COURSE

#### Freshman Year

Rhetoric, English 9 & 10 .....	3	3
Drawing, Art 14 & 15 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
French 1 & 2 or German 1 & 2 or Spanish 1 & 2 .....	4	4
Household Physics, Physics 9 & 10 .....	2	2
Hygiene, Home Economics 3 .....	1	



Credits  
1st Sem. 2nd Sem.

Textiles and Garment Making, Home Economics 11 .....	3	
Food Preparation, Home Economics 4 .....		4

**Sophomore Year**

English Literature, English 11 & 12 .....	3	3
Household Chemistry, Chemistry 8 .....	4	
General Botany, Botany 2 & 3 .....	4	4
French 3 & 4 or German 3 & 4 or Spanish 3 & 4 .....	4	4
Food Preparation, Home Economics 5 .....	3	
Dressmaking, Home Economics 12 .....		3
Chemistry of Foods, Chemistry 4 .....		4

**Junior Year**

Medieval & Modern History, History 7 & 8 ....	3	3
General Zoology, Zoology 3 & 4 .....	4	4
Bacteriology, Zoology 10 .....	4	
Psychology, Education 1 .....	3	
Advanced Dressmaking, Home Economics 13 ...	2	
English Literature, English 13 & 14 .....	2	2
Dietetics & Sewing, Home Economics 6 .....		3
Theory of Design, Art 3 .....		1
Extempore Speaking, Public Speaking 3 .....		2
Elective .....		3

**Senior Year**

Economics, History 15 .....	3	
Art History, Art 6 & 7 .....	2	2
Applied Design, Art 4 & 5 .....	2	2
Special Problems in Cookery, Home Economics 7 .....		3
Sanitation, Home Economics 8 .....	2	
Home Nursing, Home Economics 9 .....		2
The Home and Market, Home Economics 10 ....	3	
Sociology, History 16 .....		3
Elective .....	6	6

**MECHANICAL ENGINEERING**

**Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 3 & 4 ...	2	2
Mechanical Drawing, Mechanical Engineering 5..	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2

**\*MECHANICAL ENGINEERING (Continued)**

	Credits	
	1st Sem.	2nd Sem.
Plane Surveying, Civil Engineering 1 .....		2
Elementary Mechanics, Mathematics 16 .....		2

**Sophomore Year**

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	4	4
English Literature, English 17 & 18 .....	3	3
Machine Shop, Mechanical Engineering 4 .....	3	
Calculus, Mathematics 12 .....		5
Descriptive Geometry, Mechanical Engineering 7	2	
Machine Design, Mechanical Engineering 8 ....		3
General Astronomy, Mathematics 15 .....		3
Military Tactics .....	1	1
Military Science, Military 1 .....		1

\*Students expecting to teach should see Education Department.

**Junior Year**

Machine Design, Mechanical Engineering 9.....	2	
Elements of Mechanism, Mechanical Engineering		
10 .....	3	
Electricity & Magnetism, Electrical Engineering 1	4	
Hydraulics, Civil Engineering 5.....	3	
Calculus & Analytic Mechanics, Mathematics		
13 & 14.....	5	3
Graphic Statics, Civil Engineering 3.....	2	
Steam Engines & Thermodynamics, Mech. Engi-		
neering 12 .....		5
Mechanics of Material, Mechanical Engineering 2		5
Electrical Measurements, Electrical Engineering 2		1
Alternating Currents, Electrical Engineering 3..		5

**Senior Year**

Masonry & Foundations, Mech. Engineering 25..	2	
Experimental Engineering, Mech. Eng. 16 & 17.	3	4
Steam Boilers, Mech. Engineering 13.....	2	
Engineering Design, Mech. Engineering 19.....	4	
Highway Construction or Irrigation, Civil Engi-		
neering 4 or 11.....	2	
Economics, History 15.....	3	
Structural Design, Mech. Engineering 21.....		4
Contracts & Specifications, Civil Engineering 13		2
Reinforced Concrete, Civil Engineering 14.....		3
Gas & Oil Engines, Mech. Engineering 11.....		2
Elective .....	2	2

**\*ELECTRICAL ENGINEERING****Freshman Year**

	Credits	
	1st Sem.	2nd Sem.
Rhetoric, English 9 & 10.....	3	3
College Algebra, Mathematics 8.....	3	
Trigonometry, Mathematics 9 & 10.....	2	2
Elementary Mechanics, Mathematics 16.....		2
Elementary Chemistry, Chemistry 1 & 2.....	4	4
Extempore Speaking, Public Speaking 3 and 4..	2	2
Mechanical Drawing, Mech. Engineering 15....	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2.....	1	
Machine Shop, Mech. Engineering 3.....		2
Plane Surveying, Civil Engineering 1.....		2

**Sophomore Year**

Analytic Geometry, Mathematics 11.....	5	
General Physics, Physics 3 & 4 .....	4	4
English Literature, English 17 & 18.....	3	3
Machine Shop, Mech. Engineering 4.....	4	
Calculus, Mathematics 12.....		5
General Astronomy, Mathematics 15.....		3
Descriptive Geometry, Mech. Engineering 7....	2	
Machine Design, Mechanical Engineering 8.....		3
Military Tactics .....	1	1
Military Science, Military 1.....		1

**Junior Year**

Electricity and Magnetism, Elec. Engineering 1	4	
Machine Design, Mech. Engineering 9.....	2	
Elements of Mechanism, Mech. Engineering 10..	3	
Hydraulics, Civil Engineering 5.....	3	
Calculus & Analytic Mechanics, Mathematics 13 & 14.....	5	3
Graphic Statics, Civil Engineering 3.....	2	
Electrical Measurements, Elec. Engineering 2 ...		1
Alternating Currents, Elec. Engineering 3.....	5	
Steam Engines & Thermodynamics, Mechanical Engineering 12 .....		5
Mechanics of Materials, Mech. Engineering 15...		5

\*Students expecting to teach should see Educational Department.

Dynamo Electric Machinery, Electrical Engi- neering 4 .....		5
Dynamo Design, Electrical Engineering 5.....	3	
Masonry & Foundations, Mech. Engineering 25..	2	
Steam Boilers, Mech. Engineering 13.....	2	

**\*ELECTRICAL ENGINEERING (Continued)**  
**Senior Year**

	Credits	
	1st Sem.	2nd Sem.
Experimental Engineering, Mechanical Engineering 16 & 17.....	3	4
Economics, History 15.....	3	
Electric Light & Power Distribution, Electrical Engineering 6 .....		5
Reinforced Concrete, Civil Engineering 14.....		3
Contracts & Specifications, Civil Engineering 13		2
Gas & Oil Engines, Mechanical Engineering 13..		2
Elective .....		2

**\*CIVIL ENGINEERING**  
**Freshman Year**

Rhetoric, English 9 & 10.....	3	3
College Algebra, Mathematics 8.....	3	
Trigonometry, Mathematics 9 & 10.....	2	2
Elementary Chemistry, Chemistry 1 & 2.....	4	4
Extempore Speaking, Public Speaking 3 & 4....	2	2
Mechanical Drawing, Mechanical Engineering 5.	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2.....	1	
Machine Shop, Mechanical Engineering 3.....		2
Plane Surveying, Civil Engineering 1.....		2
Elementary Mechanics, Mathematics 16.....		2

**Sophomore Year**

Analytic Geometry, Mathematics 11.....	5	
General Physics, Physics 3 & 4.....	4	4
English Literature, English 17 & 18.....	3	3
Plane Topographical Surveying, Civil Eng. 2....	4	
Military Tactics .....	1	2
Descriptive Geometry, Mechanical Engineering 7.	2	
Calculus, Mathematics 12.....		5
Machine Design, Mechanical Engineering 8.....		3
General Astronomy, Mathematics 15.....		3

**Junior Year**

Calculus and Analytic Mechanics, Mathematics 13 & 14.....	5	3
Electricity and Magnetism, Elec. Engineering 1	4	
Elements of Mechanism, Mech. Engineering 10...	3	
Hydraulics, Civil Engineering 5.....	3	
Graphic Statics, Civil Engineering 3.....	2	
Highway Construction or Irrigation, Civil Engineering 4 or 11.....	2	

**CIVIL ENGINEERING (Continued)**  
**Senior Year**

	Credits	
	1st Sem.	2nd Sem.
Steam Engines & Thermodynamics, Mech. Engineering 12 .....		5
Mechanics of Materials, Mechanical Eng. 15...		5
Stresses, Civil Engineering 6.....		4
Railroad Surveying or Sanitary Engineering, Civil Engineering 7 or 15.....		3
Economics, History 15.....	3	
Geology, Agronomy 10 .....	5	
Bacteriology, Zoology 10 .....	4	
Structural Details, Civil Engineering 8.....	2	
Structural Steel Design, Civil Engineering 9....	3	
Masonry & Foundations, Mech. Engineering 25..	2	
Experimental Engineering, Mech. Engineering 16 & 17.....	3	4
Irrigation or Highway Construction, Civil Engineering 11 or 4.....	2	
Contracts and Specifications, Civil Engineering 13		2
Bridges and Dams, Civil Engineering 13.....		4
Reinforced Concrete or Sanitary Engineering, Civil Engineering 14 or 15.....		3
Railroad Surveying, Civil Engineering 7.....		3
Elective .....	2	2

**\*GENERAL SCIENCE COURSE**

**Freshman Year**

Rhetoric, English 9 & 10.....	3	3
Elementary Chemistry, Chemistry 1 & 2.....	4	4
Military Tactics, or Art 14 & 15.....	1	1
French 1 & 2 or German 1 & 2 or Spanish 1 & 2	4	4
Trigonometry, Mathematics 9.....	2	
Plane Surveying, Civil Engineering 1.....		2
Food Preparation, Home Economics 3.....		4
Textiles & Garment Making, Home Economics 11	3	
Electives to fill out eighteen hours from the following subjects:		
Carpentry & Wood Turning, Mechanical Engineering 1a & 1b .....	3	3
Forging, Mechanical Engineering 2.....	2	
Mechanical Drawing, Mech. Engineering 5..	3	
Business Law Commerce 9.....	3	
General Accounting, Commerce 13.....	3	3

**Sophomore Year**

English Literature, English 11 & 12.....	3	3
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**GENERAL SCIENCE COURSE (Continued)**

	Credits	
	1st Sem.	2nd Sem.
Medieval & Modern History, History 7 & 8.....	3	3
French 3 & 4, German 3 & 4, or Spanish 3 & 4	4	4
Military Tactics .....	1	1
Two of the following sciences:		
General Botany, Botany 2 & 3.....	4	4
General Zoology, Zoology 3 & 4.....	4	4
Quantitative Chemistry, Chemistry 3 .....		3
General Physics, Physics 3 & 4.....	4	4
Analytic Geometry, Mathematics 11.....	5	
Calculus, Mathematics 12.....		5
Organic Chemistry, Chemistry 9.....	4	
Volumetric Analysis, Pharmacy 9.....		4
Military Science, Military 1.....		1

NOTE—Students who have received the degree of Pharmacy Graduate may receive the degree of Bachelor of Science upon completing sufficient work in addition to the two-year course to make one hundred and forty-four credits.

**Junior Year**

General Astronomy, Mathematics 15.....		3
American Government, History 13.....	3	
Psychology, Education 1.....	3	
Extempore Speaking, Public Speaking 3.....	2	
Political Parties, History 14.....		2
Elective from Group 1.....	3	3
Elective from Groups 1 & 2.....	7	10

**Senior Year**

Economics, History 15.....	3	
Geology, Agronomy 10.....	5	
Sociology, History 16.....		3
Elective from Group 1.....	3	3
Elective from Groups 1 & 2.....	7	12

\*Students expecting to teach should see Education Department.

**ELECTIVES IN JUNIOR AND SENIOR YEARS IN  
GENERAL SCIENCE****Group One**

General Botany, Botany 2 & 3.....	4	4
Economic Botany, Botany 12.....	3	
Plant Physiology, Botany 4.....		4
Plant Pathology, Botany 5 .....	4	
Heredity, Botany 10.....		3
Classification, Botany 7.....	4	

### ELECTIVES IN JUNIOR AND SENIOR YEARS IN GENERAL SCIENCE (Continued)

	Credits	
	1st Sem.	2nd Sem.
Quantitative Chemistry, Chemistry 3.....		3
Household Chemistry, Chemistry 8.....	4	
Agricultural and Sanitary Analysis, Chemistry 5	4	
Chemistry of Foods, Chemistry 4.....		4
Industrial Chemistry, Chemistry 7.....	3	
Agricultural Chemistry, Chemistry 6.....		3
Volumetric Analysis and Drug Assaying, Phar- macy 9 .....		4
Organic Chemistry, Chemistry 10 & 11 .....	5	5
Plant Histology, Botany 8 & 9.....	4	4
General Physics, Physics 3 & 4 .....	4	4
Advanced Physics, Physics 5 & 6 .....	4	4
Heat, Physics 7 .....	4	
Light, Physics 8 .....		4
General Entomology, Entomology 3 & 4.....	2	3
Economic Entomology, Entomology 5 & 6.....	3	3
Systematic Entomology, Entomology 7 & 8.....	2	2
Household Pests, Entomology 9.....		3
Insects and Disease, Entomology 10.....	2	
Nature Study .....	3	
Bird Study, Entomology 11.....		2
Animal Behavior, Entomology 13.....	2	
Beekeeping, Entomology 14.....	3	
General Zoology, Zoology 3 & 4.....	4	4
Histology, Zoology 7 & 8.....	4	4
Bacteriology, Zoology 10.....	4	
Embryology, Zoology 9.....	3	
Comparative Anatomy of Vertebrates, Zoology 12		3
Analytic Geometry, Mathematics 11.....	5	
Calculus, Mathematics 12.....		5
Calculus and Analytic Mechanics, Mathematics 13	5	
Analytic Mechanics, Mathematics 14.....		3
Meteorology, Agronomy 11.....		3

#### Group Two.

French, French 5 & 6.....	3	3
German, German 5 & 6.....	3	3
English Literature, 13 & 14 .....	3	3
English Literature, English 15 & 16.....	3	3
The English Novel, English 19 & 20.....	3	3
Biblical Literature, English 21 & 22.....	2	2
History of the West, History 19 & 20.....	2	2
Rural Sociology, History 17.....	2	
Nineteenth Century History, History 12.....	3	2

### ELECTIVES IN JUNIOR AND SENIOR YEARS IN GENERAL SCIENCE (Continued)

	Credits	
	1st Sem.	2nd Sem.
Rural Economics, History 18 .....	2	
Theory of Design, Art 3.....		1
Applied Design, Art 4 & 5.....	2	2
Art History, Art 6 & 7.....	2	2
Theory & Interpretation of Musical Forms, Music 6 .....	2	
History of Music, Music 7.....	3	
Harmony .....	3	3
Industrial Publicity, Commerce 15.....	2	
Business Law, Commerce 9.....	3	
Money & Banking, Commerce 10.....		3
Economic Geography, Commerce 13.....	3	3
General Accounting, Commerce 11 & 12 .....	3	3
Literary Interpretation, Public Speaking 1 & 2.	3	3
Extempore Speaking, Public Speaking 3 & 4....	2	2
Extempore Speaking, Public Speaking 5 & 6....	1	1
Argumentation and Debate, Public Speaking 7..	2	
Public Address, Public Speaking 9 & 10.....	2	2
Elementary Public Speaking, Public Speaking 11 & 12.....	4	4
The Speech for Special Occasions, Public Speak- ing 8 .....		2
Carpentry and Wood Turning, Mechanical Engi- neering 1a & 1b .....	3	3
Forging, Mechanical Engineering 2.....	2	
Mechanical Drawing, Mechanical Engineering 5..	3	
Field Service Regulations, Military 2.....	1	
Applied Tactics, Military 3.....		2
Military Law, Military 4.....	1	
International Law, Military 5.....		1
Military Hygiene, Military 6.....		1
Educational Psychology, Education 2.....		3
History of Education, Education 3.....	3	
School Administration, Education 4.....		3
Principles of Teaching, Education 5.....		3
Educational Measurements, Education 6.....	3	
Educational Sociology, Education 7.....		3
Observation & Practice, Education 8.....	4	4
Psychology, Education 1 .....	3	
School Administration, Education 5.....	3	
Educational Sociology, Education 6.....		3

## TWO-YEAR COURSE IN PHARMACY

Credits

1st Sem. 2nd Sem.

## First Year

Elementary Chemistry, Chemistry 1 & 2.....	4	4
General Botany, Botany 2 & 3.....	4	4
Anatomical Methods, Zoology 5 & 6.....	4	4
Pharmacy Latin, Pharmacy 1.....	3	
Military Taetics .....	1	1
Pharmacognosy, Botany 11.....		4
Pharmaceutical Problems, Pharmacy 6.....	2	

## Second Year

Materia Medica, Pharmacy 2 & 3.....	5	5
Pharmacy 4 & 7.....	5	5
Pharmacy Laboratory, Pharmacy 5 & 8.....	3	4
Organic Chemistry, Chemistry 11.....	4	
Volumetric Analysis, Pharmacy 9 .....		4

Of the additional work the following courses are required:

Rhetoric .....	6 hours
English Literature .....	6 hours
History .....	6 hours
Modern Language .....	16 hours
the remainder to be elected in physics, chemistry, botany, bacteriology, zoology, or histology. Students electing physics should take trigonometry.	

# Department of Instruction

## Animal Husbandry

PROFESSOR WILSON; ASSOCIATE PROFESSOR THOMPSON; MR. CRAMER.

It is generally admitted that live-stock farming is the basis for an intensive agriculture and that it, as well as good farming, must be practiced if the fertility of the soil is to be maintained.

Work in this department gives the student a practical and scientific knowledge of animal husbandry as applied to South Dakota conditions. The College herds and flocks include representatives of eighteen of the leading breeds of domestic animals. These are all used for class and demonstration purposes. Men having completed this course are well equipped to manage live-stock farms and to judge stock shows and to teach.

The following subjects are offered by this department:

1. **Stock Judging.**—Three credits; first semester. Study and practice in judging of horses, cattle sheep and swine. Special attention is given to the use of score cards both for market and breeding animals.

Text: Craig's Judging Live Stock.

2. **Breeds of Live Stock.**—Three credits; second semester. A study of the various breeds, their origin, development, characteristics and adaptability as to use and locality; work accomplished by the noted breeders of the past and present day review.

Text: Plumb's Types and Breeds of Farm Animals.

3. **Advanced Stock Judging.**—Two credits; first semester; prerequisite, Animal Husbandry 1 and 2.

Particular attention is given to the placing of animals and the giving of reasons why they are so placed. This course includes the judging of market, breeding and show animals.

4. **Principles of Animal Breeding.**—Three credits; second semester; prerequisite, Animal Husbandry 2. This course deals with the laws that govern reproduction and the development of animals, and the different systems employed in producing both market and breeding animals; study of blood lines and pedigrees.

Text: Davenport's Principles of Breeding.

5. **Animal Nutrition.**—Three credits; first semester; prerequisite, Animal Husbandry 1 and 2, and Chemistry 2. This subject



deals with the physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations.

6. **Stock Feeding.**—Three credits; second semester; prerequisite, Animal Husbandry 5. A study of the feeding of the various classes of live stock, compounding of balanced rations, results of experimental and practical feeding investigations.

Text: Henry's Feeds and Feeding.

7. **Live Stock Production and Management.**—Four credits; second semester; prerequisites, Animal Husbandry, 1, 2, and 6. This course will consist of lectures pertaining to the proper locations for live stock farms, the kind and arrangement of buildings, founding and management of herds and flocks, capital required, methods of selling, etc.

8. **Poultry Culture.**—Two credits; first semester. A general course dealing with housing, yarding, marketing and the care of breeding and growing poultry.

9. **Poultry Feeding.**—One credit; first semester. This course should be preceded or accompanied by Poultry Culture. A course dealing with the feeding of breeding flocks; laying flocks; fattening for market and home use, and a general discussion of feeds as adapted to poultry.

10. **Poultry Breedings.**—Two credits; second semester. This course should be preceded or accompanied by Poultry Culture. A study of the mating systems used in producing show and utility birds; the mechanism, operation and management of incubators and brooders.

### **Dairy Husbandry**

**PROFESSOR LARSEN; MR. JONES; MR. HUNGERFORD; MR. GREGORY; MR. LYNCH.**

This department offers two separate courses: (1) The Four-Year Agricultural Course, the last one and a half years of which are devoted chiefly to special dairy studies. (2) The Three-Months Dairy Course.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become successful operators of creameries, cheese factories, central plants and dairy farms.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is

good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery and cheese factory throughout the year. The department occupies a two-story brick building. On the first floor are the engine room, creamery rooms with full equipment for butter, cheese and ice cream making, refrigerating rooms, locker and reading room, and a large laboratory used for instructional purposes. On the second floor are located class rooms, offices, dairy bacteriology laboratory, and chemistry research laboratory.

The dairy herd, which consists of representatives of the principal dairy breeds, affords an excellent opportunity to become acquainted with dairy types. The dairy barn is large and well equipped. Milking machines are in daily use, thus affording students opportunity to acquire practical knowledge regarding machine milking.

Experiments relating to feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments, note manner of outlining and executing investigational work, and profit from results. Advanced worthy students may arrange to assist in some of this work.

The following work is offered:

1. **Farm Dairying.**—Three credits; second semester. A study of the economic production, secretion and composition of milk; of the comparative economy in disposing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germs and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. **Inspection and Testing of Dairy Products.**—Four credits; first semester.

Those taking this course should have at least one term's work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

**3. Dairy Bacteriology.**—Four credits; second semester.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, and bacteria as related to the manufacture of cheese. General bacteriology is a prerequisite study.

**4. Factory Operation (Creamery).**—Four credits; first semester; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

**5. Factory Operation (Cheese).**—Four credits; second semester.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheese, including the principles involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.

**6. Dairy Management.**—Three credits; first semester. The various methods of improving and upbuilding a dairy herd, and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody study of the extent to which dairy farming is practiced and under which conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

**7. Dairy Technology.**—Four credits; second semester; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

**8. Dairy Research.**—Second semester. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

**9. Dairy Practice.**—The college has a commercial creamery and cheese factory in operation every day during the year except

Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

10. **Domestic Dairying.**—Two credits; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adulteration of milk and dairy products, modification of milk, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making and judging of cheese and butter will be demonstrated in the college creamery laboratory.

11. **Advanced Inspection of Dairy Products.**—Four credits; first semester; prerequisite, Dairy 2, Chemistry 3.

This course takes up a study of the properties of the component parts of milk and its products including abnormal milk, condensed and powdered milks, butter from neutralized cream, oleomargarine and leading types of cheese.

12. **Advanced Dairy Bacteriology.**—Four Credits; first semester; prerequisite, General Bacteriology and Dairy 3; elective. This course is a continuation of Dairy Bacteriology (Course 3). It includes a study of isolation of the bacteria of special importance in the dairy industry, such as: thorough acquaintance of characteristics of the bacteria that produce undesirable fermentations, bitter milk, slimy milk, gargety milk, gassy cheese and condensed milk, rancid butter, etc.—and pathogenic organisms especially important in connection with market milk supply. It also includes the study of the desirable bacteria, such as: lactic acid producing organisms, those that produce desirable flavors in dairy products and the pure cultures widely used in connection with fermented milk drinks.

13. **Dairy Extension.**—Four credits; first semester, prerequisite, Dairy 1, 2, and 6; elective. This study emphasizes chiefly the subjects applied in different methods employed in the co-operative improvement of dairy cattle, co-operative building of silos, formation of cow testing associations and methods of keeping the various records, the making of official records with cows belonging to the various breeds, and the formation of co-operative creameries and co-operative marketing of dairy cattle and dairy products.



## Veterinary Medicine

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DR. LIPP

The prevention of animal disease by the adoption of better hygiene, sanitation, and care is receiving more attention today than ever before. The reason for this is due to a fuller knowledge of the best methods of applying these measures to the prevention of disease, and to the rapidly increasing desire on the part of stock raisers and others for preventive measures. Even with the most modern methods of treatment, it is truer today than ever before, that preventing animal disease is more desirable and less expensive than treating it. The rapidly increasing value of live stock together with the danger of introducing and spreading disease by the more complex systems of live stock raising and transportation, have served to accentuate the rapidity with which diseases spread over wide areas. Thru education and the necessity for protecting his own interests, the farmer of today is paying more attention to these matters. Indeed the agricultural college that does not give such courses as will enable its students to act intelligently alone and in co-operation with the local and state authorities for the prevention and control of animal diseases, fails to fulfill its entire duty to the state and nation.

All the courses offered by the Veterinary Department have been planned to give students such training as will assist them in the prevention of diseases common in this state as far as possible. No attempt is made to teach students to diagnose or treat any of the more serious diseases, but rather to recognize their seriousness early and secure the services of trained veterinarians. Treatment is outlined for some of the minor ailments and abnormal conditions frequently encountered in handling live stock. Such treatment, however, is only for those diseases that yield to the action of simple remedies. No attempt is made to prepare students to treat their own animals, but every effort is made to have them realize the value of competent veterinary service and to secure it early rather than delay, thereby increase the probability of retarded recovery or total loss.



1. **Veterinary Anatomy.**—Two credits; second semester. Briefly stated, the object of this course is to give the student a knowledge of the structure of the front limb of the horse, and such care as is needed to maintain it in a healthy condition, and fit for the highest service. The lectures consist of a brief study of the anatomy of the front limb, and a more detailed study of the structure of the horse's foot. Especial emphasis is placed on the prevention of diseases of the foot by care and proper paring. This course also assists the students taking advanced stock judging and in the selection of better conformation in breeding animals.

2. **Veterinary Hygiene and Sanitation.**—Two credits; first semester. This course includes a study of the animals' needs of ventilation, the best systems of ventilation, results of lack of ventilation, food, and water as a cause of disease, stable lighting, the barn yard, feed lots and their surroundings, and in fact all parts of the barn and its surroundings in their relation to animal health and the prevention of disease.

3. **Veterinary Medicine.**—Three credits; second semester. This course deals with the cause, spread, and control of the common infectious and contagious diseases of farm animals. No attempt is made to develop proficiency in diagnosis, but rather to understand the methods by which these diseases spread, and to teach the student to co-operate intelligently with local and state authorities for their control and eradication.

4. **Common Diseases.**—Three credits; first semester. This course includes a study of many of the commoner diseases, their causes and prevention. Simple treatment and methods of handling are studied in connection with those diseases that can be easily diagnosed, and that yield readily to such methods. The student is not taught to use powerful or dangerous drugs. The treatments studied do not interfere with legitimate veterinary practice, for the reason that the diseases and treatments are of the simplest kind and for which a trained veterinarian is rarely called.

5. **Veterinary Physiology.**—Three credits; second semester. This course includes a study of the various physiological processes in farm animals. Special attention is given the processes of digestion and assimilation in horses and cattle. Food is traced from the mouth thru the various digestive processes to the tissues of the body. The use of food within the tissues and the production of waste are then studied, and finally the excretions and their composition. This course is planned to be of very material aid to the intelligent feeding of live stock.

### **Agronomy**

**PROFESSOR HUME; ASSOCIATE PROFESSOR HUTTON; ASSISTANT  
PROFESSOR CHAMPLIN; MR. LOOMIS; MR. FOWLDS; MR.  
RILLING.**

The Agronomy Department is the department of soils and

crops. To help students apply the principles of science to crop production on the farms of South Dakota is the essential purpose of the courses offered.

What is soil in South Dakota, or on some farm within the state? The student may learn to outline soil areas, to analyze soils, to observe field experiments, and answer the question for himself.

What crops will grow on South Dakota soil areas, and how may the growing of them be made most profitable to the man who does the work? A study of the results of experiments will answer the questions for the student. It is attempted to give the student in agronomy that accurate knowledge of conditions which is necessary to success in farming.

The courses offered are fundamental, practical, scientific. They are designed for South Dakota farmers. They may be taken with profit by prospective teachers of agriculture, or experiment station workers.

1. **Farm Crops.**—Four credits; first semester. Grain judging and seed testing. Score card judging of wheat, barley, oats, emmer, potatoes, corn and other crops. Weeds and weed seeds. Classification, harvesting, grading, cleaning, storage and care of crops. Open to all college students, without prerequisite.

2. **Farm Crops.**—Four credits; second semester; prerequisite, Agronomy 1, or Botany 1, or one year of college work. Special crops adapted to South Dakota conditions; methods, cost and profit in production; practical and scientific arrangement of crop rotations with a view to better crops; the relation of the crops produced in South Dakota to the world supply. Attention is given to the improvement of crops by selection and breeding.

3. **Advanced Farm Crops.**—Elective. Four to eight credits; prerequisite, Agronomy 2. Special problems for advanced students. The advanced student may become interested in some particular line of investigation, as crops for forage, a problem in corn breeding, the effect of storing of seed of corn or other crops upon germination and growth, the effect of various methods of cultivation, and problems of crop improvement. Such work may imply a study of previous experiments, cropping experiments in green house or on the field. The student may be required to submit a final report or thesis. Time and number of hours to be arranged with instructor in charge.

4. **Soil Physics and Management.**—Four credits; first semester; prerequisites, Physics 1 and 2, Chemistry 1 and 2. This course deals with the origin and development of the soil under different climatic conditions; classification of soils upon several bases; texture, porosity, specific gravity, plasticity, capillarity, granulation

of soils; the soil as a reservoir for water; the movement and control of soil water; irrigation and drainage; the alkali problem; aeration of the soil, its relation to soil texture and plant growth; soil temperature; the physical effect of manures upon the soil; soil erosion by wind and running water—blowing and washing—and their control; the practical application of the foregoing to methods of tillage; crop rotations and the application of green and farm manures in the management of different types of soil. The laboratory work includes a careful study of the physical properties of the soil through observation and practice; soils are also studied under field and green house conditions.

**5. Soil Fertility.**—Four credits; second semester; prerequisite, Agronomy 1 and 4, and Chemistry 3. The relation of the fertility content of the soil to crop yields; effect of supplying various elements of fertility; effects of different rotations and system of farming in relation to permanent agriculture; a study of a system of agriculture in relation to permanent agriculture; a study of a system of agriculture adapted to South Dakota conditions. The laboratory work includes the analysis of manures and fertilizers and the determination of their agricultural and commercial values; the analysis of various farm products; the analysis of a soil, preferably from the student's home farm, to determine the fertility content. These analysis serve as the basis for devising a system of permanent agriculture for the student's home farm.

**6. Advanced Soil Physics.**—Four credits; first semester; prerequisite, Agronomy 4. This course is designed for those students who wish to continue the work in Soil Physics begun in Agronomy 4. A study in the field of the effects of discing, harrowing, rolling, subsoiling, frequency and depth of cultivation with reference to conservation of soil moisture. The student may select a soil in which he is interested and make a complete physical analysis thereof; he may make a careful study of the movement of the water therein and its effect upon the growth of plants; he may choose a special irrigation or drainage problem in which he is interested; the results of the work are summarized in a final report or thesis. Students who elect this course are advised to signify their intention of so doing at the end of the college year, so that materials may be collected during the summer, and observations reported.

**7. Advanced Soil Fertility.**—Four credits; second semester; prerequisites, Agronomy 4 and 5. This course is a continuation of Agronomy 5 and permits the student to study in detail a special soil in which he may be interested or to pursue a special problem. The work may include pot culture work in the green house; analysis of the soil used in the pots; application of various fertility elements and their relation to the management of the soil; the study of the micro-organisms of the soil in relation to the preparation and availability of plant food, preparation of culture media, cultures from soil suspensions, preparation and study of a few pure cultures, am-

monifications, nitrification, nitrogen fixation, legume bacteria and conditions favorable to their growth, inoculation; results of bacterial action determined by quantitative analysis; reading of bulletins, books, etc., and the preparation of a bibliography. The results of the study will be submitted in a final report or thesis.

8. **Soils.**—Two credits; second semester. A consideration of the effects of the change in water contents of soils through irrigation and drainage; the effect upon the physical condition of the soil and upon its productivity, special attention given to the problems of irrigation and drainage of unreclaimed lands in South Dakota. Lectures, reading, field observations.

9. **Earth Science; Geology.**—Five credits; first semester. A course in general geology with the greater emphasis placed upon the physical division of the subject. The geology of South Dakota in relation to soils, water supplies and mineral wealth is given special attention. Collections of rocks, minerals, typical fossils, physiographic and geologic models, lantern slides, charts and maps are available for laboratory work and reference.

10. **Earth Science; Meteorology.**—Three to five credits; second semester. A practical course dealing with the laws controlling the movements of the atmosphere, the study of climatological and weather factors, with special attention to conditions in the United States, the climate and weather of South Dakota in relation to her various economic interests, weather maps and forecasts.

**Graduate Courses.**—A limited number of courses of study may be arranged for students who have already received the Bachelor's Degree and who desire to pursue some line of investigational work. Such students should consult with the professor in charge. Problems relating to systems of farming and soil fertility, mechanical composition of soils, drainage water, variation in type as related to crop yields, influence of selection and breeding upon yield of special crops may be included in a list of possible studies for graduates.

### **Horticulture and Forestry**

**PROFESSOR HANSEN; MR. STOLTENBERG.**

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences un-



derlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are offered by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit, plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for the general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

Special stress is placed upon practical work in the grafting room.

The following work is offered :

2. **General Horticulture.**—Two credits; first semester. An introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

3. **Floriculture and Market Gardening.**—Two credits; second semester.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations, and text book work.

4. **Forestry.**—Two credits; first semester. Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees. Lectures and demonstrations.



Texts: Pinchot's Primer of Forestry; Cheyney's The Farm Woodlot; Green's Forestry in Minnesota; Proceedings of the American Forestry Congress.

5. **Systematic Pomology.**—Two credits; first semester. Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits.

Texts: American Horticultural Manual, Bailey's Principles of Fruit Culture, many Bulletins and Reports.

6. **Landscape Gardening.**—Four credits; second semester. The philosophy of the beautiful in its various modes of expression; gardening as one of the fine arts; historic developments of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds. Lectures; many text books and references.

7. **Heredity.**—Three credits; second semester. This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to society; recent theories and work in plant-breeding.

Texts: Darwin's Animals and Plants under Domestication; De Vries' Species and Varieties, their Origin by Mutation; Bailey's Plant-Breeding and Survival of the Unlike; Reports of International Conferences on Genetics; Reports of the U. S. Department of Agriculture.

8. **Plant Materials.**—One credit; second semester. A field and laboratory study of the trees, plants, shrubs and flowers used in Landscape Gardening. 1B.

9-10. **Nursery and Greenhouse Management.**—Four credits each semester. A field and laboratory study of nursery and greenhouse operations throughout the school year. Carefully written reports are prepared. This is supplemented by the required practical work outside of the school year.

11. **Experimental Horticulture.**—Two credits; second semester; prerequisite, Courses 1-8. A survey of some of the chief problems. An effort is made to develop the spirit of initiative and originality in research work.

## Home Economics

MISS FROMME; MISS HARTGERING; MISS HALLAND; MISS WOOD;  
MISS SOMERS.

The purpose of the department is to provide training along the lines of intelligent house-keeping and home-making. The location for carrying on the work is most favorable, being the entire third floor of the North Building, where there is abundance of room, air and light. The rooms consist of a large kitchen, a dining-room, a sewing-room and a recitation room provided with the equipment necessary for carrying on the work. Through the general library, opportunity is given for the use of the newest and best literature relating to the subject.

The work offered is intended to impart knowledge, develop skill in execution, stimulate self-direction and broaden and strengthen the individual. A good foundation of pure science is laid for all applied science while handwork, including sewing, gives opportunity for artistic expression the principles of which are gained through the regular art training.

The general subjects of the department are as follows:

For Home Economics 1 and 2, see the preparatory department.

3. **Hygiene.**—One credit, first semester; required of all freshmen. This course includes a general study of hygienic subjects as care of person, clothing and surroundings with consideration of social and ethical questions.

4. **Food Preparation.**—Four credits; second semester; prerequisite, freshman or higher classification. The work covers the study of food in source, composition, nutritive value, preparation and serving with training in care of kitchen and utensils.

5. **Food Preparation.**—Three credits; first semester; prerequisite, Home Economics 4. This is a continuation of Course 4 including food preservation and other advanced problems in cookery.

6. **Serving and Dietetics.**—Three credits; second semester; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 1. The work includes preparation of menus with special reference to balanced diet, cost, cooking and serving of meals and calculation of dietaries.

7. **Special Problems in Cookery.**—Three credits; second semester; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 2. The course covers diet for children and invalids and other advanced work in dietetics.

8. **Sanitation.**—Two credits; first semester; prerequisites,

Chemistry 2, Botany 2 and Zoology 2. The course includes consideration of municipal and rural problems in sanitation, the care and handling of food in the market and in the home, the lighting, heating, ventilation, plumbing and general care of the house.

9. **Home Nursing.**—Two credits; second semester. Senior classification or special advanced standing necessary. The work covers the general care of the sick, directions for emergencies and consideration of some common diseases.

10. **The House and Market.**—Three credits; first semester. The work embraces planning, construction, furnishing and general care, including the cost of necessary articles, purchase and care of food, the preparation of marketing lists and a study of accounts.

11. **Textiles and Garment Making.**—Three credits; first semester. The course covers the making of simple and useful articles in which are incorporated the stitches necessary for garment making. The use and care of machines is considered and the making of a set of undergarments is also required. A study is made of the fabrics used in such work along the lines of source, manufacture, general characteristics and qualities and adaptations to specific uses.

12. **Dressmaking.**—Three credits; second semester; prerequisite, Home Economics 10. The work includes alteration and use of commercial patterns, cutting, fitting and making of a shirt-waist suit and the alteration of an old dress. Supplementary work, to meet individual needs, may be required.

13. **Advanced Dressmaking.**—Two credits; first semester; prerequisite, Home Economics 11 and 12. This course gives practice in designing costumes, making patterns, draping and fitting a gown.

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## Mechanical Engineering

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**PROFESSOR SOLBERG; PROFESSOR COOK; MR. BONELL;  
MR. STEFFINS.**

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the class-room is supplemented and practically exemplified by

practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible position in manufacturing establishments.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity of tools. They are furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50-horse power steam engine.

The Experimental Engineering Laboratory is equipped with a 100,000 pound vertical screw testing machine, for making tensile and compressive tests of the various materials of construction; an automatic shot cement briquette-testing machine; a gas engine; a 10 by 10 steam engine; an 8 by 10 steam engine; a 5 by 7 steam engine; and there are also available for this work a 12 by 14 steam engine and two 48 by 16 horizontal tubular boilers. A calorimeter for determining the heat values of gases; a calorimeter for making British thermal unit tests of coal, and an apparatus for flue gas analysis are also used in this work.

The laboratory also possesses a large amount of small apparatus such as indicators, planimeters, steam gauges, thermometers, etc., and a complete outfit for making tests of sand, cement and concrete.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered :



1a. **Carpentry and Wood Turning.**—Three credits; first semester. Demonstration and work in the care and use of wood working tools. Talks on design of furniture, cabinets and frames. Practice at the bench in the working of a variety of woods and finishes. Work in framing or building construction. The study of manual training outlines.

1b. **Carpentry and Wood Turning.**—Three credits; second semester; continuation of Course 1a.

2. **Forging.**—Two credits; first semester. Demonstrations and work in the care and use of the fire and forging tools together with the work in iron, mild steel and tool steel. The class work will include work in bending, drawing out, upsetting, shaping and tempering of tools, and art smithing. The course will offer a good outline in metal work for manual training.

3. **Machine Shop.**—Two credits; second semester. Includes a study of the materials used in machine work; shop sketching; methods of laying out work; exercises in pipe fitting, chipping, filing, scraping, belt lacing, shaft aligning, babbiting, riveting, soldering, hand and ratchet drilling; and the elementary principles of machine work.

4. **Machine Shop.**—Three credits; first semester. A study of the principles and methods of machine work; problems involving the use of the various machine tools, as the lathe, planer, shaper, milling machine, drill grinder, drill press, etc. Regular text book and class work supplements the actual work in the shop during both semesters of machine shop. Prerequisite, Machine Shop 3.

5. **Mechanical Drawing.**—Three credits; first semester. Instrumental, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. **Architectural Drawing.**—Two credits; first or second semester. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. **Architectural Design.**—Two credits; first semester. Principles of planning introduced in practical problems, exercises in composition and details.

6b. **Perspective.**—Three credits; first or second semester.

7. **Descriptive Geometry.**—Two credits; first semester; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. **Machine Design.**—Two credits; second semester. Solution of various problems involving the design of simple parts of the machine.

9. **Machine Design.**—Two credits; first semester. Continuation of Mechanical Engineering 8.

10. **Elements of Mechanism.**—Three credits; first semester.



Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. **Gas Engines and Gas Producers.**—Two credits; second semester; prerequisite, Thermodynamics. Study of the theory, design and operation of gas, gasoline and oil engines and of the various types of gas producers.

12. **Steam Engines and Thermodynamics.**—Five credits, second semester; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. **Steam Boilers.**—Two credits; first semester; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

14. **Kinematics.**—Two credits, second semester. Geometry of machinery, problems in the design of motion transmitting appliances.

15. **Mechanics of Materials.**—Five credits; second semester; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of the materials of construction and the behavior of and characteristics displayed by these materials when put under stress. Text: Merriam's Mechanics of Materials.

16. **Experimental Engineering.**—Three credits; first semester; prerequisite, Mechanics of Materials. Testing of materials of construction including investigation of problems in connection with use of concrete.

17. **Experimental Engineering.**—Four credits; second semester. Includes testing of gauges, thermometers, planimeters; determination of heat value of coal; use of steam and gas engine indicator, throttling and separating calorimeters, dynamometers and Prony actual running conditions. It is the endeavor in this work to make the student familiar with the construction and operation of steam brakes; and complete efficiency tests of engines and boilers under engines, steam boilers, gas engines and the many attachments and auxiliaries necessary for their efficient operation.

18. **Experimental Engineering.**—Three credits; second semester. Includes the problems and investigations embraced in Experimental Engineering 18 which are of particular importance to the Civil Engineer.

19. **Engineering Design.**—Four credits; first semester. Solution

in the drawing room of some practical problems in design and making working drawings of same.

20. **Engineering Design.**—Four credits; second semester. Continuation of Mechanical Engineering 21.

21. **Structural Design.**—Two credits; first semester. Design of roofs and buildings for power stations. For students in mechanical and electrical engineering.

22. **Structural Engineering.**—Two credits; second semester. Continuation of Mechanical Engineering 23, with special reference to results obtained from Mechanical Engineering 19.

23. **Statics.**—Two credits; first semester. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

24. **Heating and Ventilation.**—Two credits; second semester. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

25. **Masonry and Foundations.**—Two credits; first semester. A study of cement, concrete and building stone with special reference to their use in walls and foundations; bearing power of soils; design and construction of foundations of various kinds.

26. **Special Problems in Experimental Engineering.**—Two credits; second semester; open to senior engineering students upon approval of head of their department.

27. **Concrete Construction.**—Two credits; first semester; elective; open to junior or senior students in general science and agricultural courses. Will include practical problems in the use of concrete and the testing of concrete materials.

28-29. **Thesis Work.**—Two or three credits each semester. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

# Electrical Engineering

PROFESSOR BRACKETT.

The purpose of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both direct and alternating current types, transformers and measuring instruments of different types and classes for recording and measuring currents, pressures and speeds. A sixty-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered:

1. **Electricity and Magnetism.**—Four credits; first semester; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the principles of the electric and magnetic circuits, electro-magnetic induction, self-induction and capacity, also direct current dynamos and motors and their uses under ordinary service conditions.

2. **Electrical Measurements.**—One credit; second semester; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Alternating Currents.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurements of inductance and capacity, wave form of pressure and current, tests of machines and transformers.

4. **Dynamo Electric Machinery.**—Five credits; first semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1 and 3. Principles underlying the design, construction and operation of generators and motors, both direct and alternating current types. Experimental study of the behavior of different types of motors and generators, efficiency tests and adjustments of machines for different conditions of service.

5. **Dynamo Design.**—Three credits; first semester; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1, 3 and 4 coordinately with this subject. In this course the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

6. **Electric Light and Power Distribution.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 3. A study of the costs of producing electric power, distribution and wiring, selection of lamps and light distribution, interior and street illumination, electrolysis and batteries, regulating and measuring apparatus, and as many other related subjects as the time will permit.

7. **Electric Traction.**—Five credits; first semester. Various features of electric car and train operation will be studied. Among these will be types of cars, motors and controlling apparatus, the operating characteristics of various types of equipment, power stations for this kind of service, transmission lines, substations, and distributing systems. A considerable portion of the time assigned for laboratory work in the subject will be given to the inspection of traction systems in actual operation upon which accurate and detailed reports will be required.

8. **General Principles of Electrical Engineering.**—Three credits. The course will consist of a mathematical treatment of the fundamental principles of electricity and magnetism, and the application of these principles of circuits, systems and machines in regular commercial use. In some ways the course will be a review of all the electrical work of the two preceding years, but for the most part the methods used will be quite different and much more comprehensive. The object of the course is to give the student a better perspective of the whole subject of applied electricity and to develop more direct methods for solving problems in this field.

9. **Electrical Design.**—Three credits; first semester; prerequi-



site, all the work required for the Bachelor's degree in this department. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

**10. Power Stations.**—Five credits; second semester; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

**11. Long Distance Transmission.**—Two credits, second semester; prerequisite, Electrical Engineering 1 to 7 inclusive. Study of long distance line construction, protective apparatus, switchboards, cut-outs, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

**12-13. Thesis.**—Two or three credits a week, each semester. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first), and reports submitted from time to time, concerning the progress of the work, to the professor in charge.

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## Civil Engineering

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**PROFESSOR WILLIS.**

The course in Civil Engineering is designed to give a broad education in the general and scientific subjects which form the foundation of all branches of technology; and to give as much special training as time will permit in several of the more important subjects which belong to that branch of technology known as Civil Engineering.

During the freshman and sophomore years the greater part of the time is devoted to the fundamental studies which give both general culture and preparation for the technical work of the following years. The study and practice of Physics, Mathematics, Chemistry, English and Public Speak-



ing is carried on; and work in Mechanical Drawing, Machine Shop and Machine Design is given. The theory of Plane and Topographical Surveying accompanied by field work and map drawing is begun in the freshman year and continued in the sophomore year.

During the junior and senior years practically all of the time is devoted to purely engineering subjects, a large portion of which is given by the Civil Engineering Department. These subjects, the time allotted to them, and the methods of treatment, have been chosen with care and with due regard to the end in view, which is to graduate men who know how to think correctly for themselves and who are thoroughly prepared to enter any of the several branches of engineering and to make good in the truest sense. These subjects might be considered as falling naturally into three groups or divisions of civil engineering, namely: (1) Municipal Engineering, including the subjects of Surveying, Highway Construction, Hydraulics, Sanitary Engineering and Irrigation—subjects as important to the farm as to the municipality; (2) Railroad Engineering; (3) Structural Engineering and Building Construction, including the subjects of Graphic Statics, Stresses, Structural Details, Structural Design, Bridges, Dams and Reinforced Concrete. A working knowledge of the laws relating to engineering contracts and specifications is of great value to all engineers and a short treatment of this subject is given.

To aid it in carrying on its work, the department is provided with suitable equipment, which includes transits, levels, plane table, solar attachment, sextant, current meter, planimeter, protractor, rods, tapes and various hand instruments.

Men completing the work of the four-year course in this department are graduated with the degree of Bachelor of Science (B. S.). Those completing the additional fifth year course of study are given the advanced degree of Civil Engineer (C. E.).

A detailed description of each subject offered by the department follows:

1. **Plane Surveying.**—Two credits; second semester. The theory and practice of land surveying, including United States land

surveys, computation of areas, dividing land and determining heights and distances. Field work with level and transit in determination of heights and distances and in making surveys of farms. Preparation required: Plane Trigonometry and Mechanical Drawing. Text: Breed & Hosmer's Principles and Practice of Surveying.

2. **Plane and Topographical Surveying.**—Four credits; first semester; prerequisite, Civil Engineering 1. Continuation of Plane Surveying together with the theory and use of the plane table, and of the transit and stadia. Pen topography and detailed field work; the construction of topographic contour maps, leveling, triangulation and adjustment of instruments. Text: Breed & Hosmer's Principles and Practice of Surveying.

3. **Graphic Statics.**—Two credits; first semester; prerequisite, Mathematics 9 and 10, General Physics 3. Shears and bending moments in beams, center of gravity and moment of inertia of cross sections, analysis of stresses in roof and bridge trusses, mill bents and three hinged arches by graphical methods. Text: Merriman and Jacoby's Roofs and Bridges, Part II.

4. **Highway Construction.**—Two credits; first semester. The location, construction and maintenance of country highways and city streets. Text: Blanchard and Drowne's Highway Construction. Seniors and juniors take this subject at the same time, and it is given in alternate years only. It will be given in 1917.

5. **Hydraulics.**—Three credits; first semester; prerequisite, Mathematics 11 and 12, General Physics 3 and 4, Hydrostatics and Theoretical Hydraulics. The study of flow of water through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; and application to engineering, water power plants and development. Text: Merriman's Hydraulics.

6. **Stresses.**—Four credits; second semester. Preparation required: Mathematics 13 and Graphic Statics. The theory and computation of stresses in roof and bridge trusses under dead, live and wind loads. Locomotive wheel loads on plate girders and bridge trusses. Text: Merriman and Jacoby's Roofs and Bridges, Part I.

7. **Railroad Surveying.**—Three credits; second semester; prerequisite, Civil Engineering 1 and 2. Reconnaissance, preliminary and location methods, with theory of curves and turnouts. Location of a line, with the preparation of profiles and maps. The computation of earth-work and estimate of cost. Text: Allen's Railroad Curves and Earthwork. Seniors and juniors take this subject at the same time and it is given in alternate years only. It will be given in 1918.

8. **Structural Details.**—Two credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. Lectures on shop practice in making drawings and shop bills and in designing connections and other details for structural steel, including the design of beams, bearings, grillages, columns, struts and girders.

Solution of problems required. Handbooks: Cambria Steel and Bethlehem Steel.

**9. Structural Steel Design.**—Three credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. The design and the making of general and detailed drawing of beams, columns, grillages, and roof truss, a plate girder railroad bridge and a riveted or a pin connected truss bridge. Reference Book: Merriman and Jacoby's *Roofs and Bridges*, Part III, or Thomson's *Structural Design and Typical Railroad Bridges*.

**11. Irrigation.**—Two credits; first semester; prerequisite, Civil Engineering 5. A study of the principles of irrigation engineering; namely, a consideration of fundamental questions underlying the design and construction of works for holding and controlling the waters needed for agriculture; and of those matters necessary to insure the financial success of the enterprise. Text: Newell & Murphy's *Irrigation Engineering*. Seniors and juniors will take this subject at the same time, and it is given in alternate years only. It will be given in 1916.

**12. Bridges and Dams.**—Four credits; second semester; prerequisite, Civil Engineering 3, 6, 8 and 9. Continuation of Civil Engineering 9 and a study of higher structures, including continuous, draw, cantilever and suspension bridges and metallic arches. The theory and design of masonry walls, dams and arches. Text: Merriman and Jacoby's *Roofs and Bridges*, Part IV.

**13. Contracts and Specifications.**—Two credits; second semester. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's *Engineering Contracts and Specifications*.

**14. Reinforced Concrete.**—Three credits; second semester; prerequisite, Mechanical Engineering 15, Civil Engineering 3, Mathematics 13. A study of manufacture and properties of cement and reinforcing steel, and of the theory and design of plain and reinforced concrete construction. Text: Hool's *Reinforced Concrete Construction*, Vols. I and II.

**15. Sanitary Engineering.**—Three credits; second semester; prerequisite, Civil Engineering 5. The study of the principles to be observed in order that a pure water supply, and an efficient system of sewerage may be secured, and a study of the design, construction and operation of municipal water supply and sewerage disposal works. Text: Merriman's *Elements of Sanitary Engineering*. This subject is taken by seniors and juniors at the same time and is given in alternate years only. It will be given in 1917.

**16. Steel Buildings.**—Three credits; first semester; prerequisite, Civil Engineering 8 and 9. Design and general drawings of steel mill, mine and high office buildings, and arches.

**17. Dam and Reservoir Design.**—Three credits; first semester; prerequisite, Civil Engineering 3, 5 and 15, Mathematics 11 and 13.

The study of modern hydraulic construction, dams, reservoirs, levees, etc. Structures relating to water power, canals and irrigation.

18. **Hydraulic Motors.**—Three credits; first semester; prerequisite, Civil Engineering 5. A study of reaction and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

19. **Railroad Engineering.**—Three credits; second semester. The construction of the roadbed, including ballast, crossties, rails, switches, culverts, maintenance of way and elements of railroad operation. Economic location, arrangement of yards, station and terminals. Train resistance. Application of electricity.

20-21. **Thesis.**—Two and three credits each semester. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject. The subject and plan of the work should be submitted to the professor in charge not later than November first of the current year.

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## English

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**PROFESSOR BATES; ASSOCIATE PROFESSOR POWERS;  
MISS YOUNG.**

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition, and to give him an intelligent appreciation of English literature.

For English 1 to 8, see the preparatory department.

9-10. **Rhetoric.**—Three credits each semester; prerequisite, the English of the preparatory department. The main purpose of this course is to familiarize the student with the principles of rhetoric and to enable him to use them effectively in composition. To this end, written work is demanded constantly, and is carefully criticised both in the class room and in conferences between the instructor and the individual student. The work is supplemented with reading, in the choice of which the student is allowed considerable latitude.

11-12. **English Literature from 1625 to 1798.**—Three credits each semester; prerequisite, English 9-10. This course consists in a study of the literature, exclusive of prose fiction, of the ages of Milton, Dryden, Pope and Johnson. A large amount of reading and frequent papers are required. Attention is paid, in lectures, to literary movements and the relation between literature and other phases of the life of the time.



13-14. **English Literature from 1798 to 1892.**—Three credits each semester; prerequisite, English 11-12. This course covers the literature, exclusive of prose fiction, of the ages of Wordsworth and Tennyson. Much reading and occasional papers are required. Lectures are given on nineteenth century writers and literary movements, together with their relation to other phases of the life of the time. Frequent conferences are held between the instructor and the individual student.

15. **English Literature, exclusive of Drama, from the Beginnings to 1625.**—Three credits; prerequisite, English 13-14. In this course special stress is laid on ballad and epic, Chaucer, and the development of the language.

16. **English Drama from the Beginnings to 1625.**—Three credits; second semester; prerequisite, English 15. Shakspeare and his contemporaries receive the main emphasis.

17-18. **Scientific and Social Ideas in Recent Literature.**—Three credits each semester, prerequisite, English 9-10. The aim of this course is to familiarize the students in the technical departments with some of the main scientific and social tendencies of the present time as these tendencies are mirrored in current and late nineteenth century literature in England and America. Frequent papers and oral class reports are required.

19-20. **The English Novel.**—Three credits each semester; prerequisite, English 11-12. This course deals with the development of the novel from the middle of the eighteenth century to the end of the nineteenth.

21-22. **Biblical Literature.**—Two credits each semester; prerequisite, English 13-14. The object of this course is to give the student an intelligent conception of the literary value of the English Bible.

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## Modern Language

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PROFESSOR SPENCER; MISS WIMPLE; MR. MAHANY.

A good reading knowledge of French or German, or of both, is imperative for students pursuing work along scientific, technical or historical lines, and they are indispensable as literary and cultural subjects.

Two years of German are offered in the preparatory course. In the General Science, the Home Economics and the Agricultural Courses of the College, either French, German or Spanish is required during the freshman and sophomore years. Elective work in both French and German is offered



and the student is strongly advised to take a third year if possible of the language chosen. In the second year German a special division reads scientific German.

1. **German.**—Four credits; first semester. German grammar and composition; reading and telling short stories for practice in speaking German; memorizing selected poems. Text: Joynes-Meissner's Grammar.

2. **German.**—Four credits; second semester. Continuation of German 1. Storms' Immensee.

1a. **German.**—Four credits; first semester. More advanced work in grammar and composition, and story telling, than in German 1. Constant practice in speaking German, and reading and memorizing of German poems. Texts: Moni der Geissbub and Gerstacher's Girmelshausen or Immensee, etc. Joynes-Meissner's Grammar.

2a. **German.**—Four credits, second semester; continuation of German 1a. Constant practice in speaking German; memorizing poems and selected passages. Texts: Joynes-Meissner's Grammar. Geschichten von Rhein.

3. **German.**—Four credits; first semester. Prose and poetry of the last century; composition and conversation; memorizing of selected poems. Text: Joynes-Meissner's Grammar. Geschichten Deutschen Stadten.

4. **German.**—Four credits; second semester; continuation of German 3. Text: Schiller's William Tell. Additional reading and composition.

5. **German.**—Three credits; first semester. Written and oral composition, and readings such as Freytag's Journalisten and Goethe's Hermann und Dorothea.

6. **German.**—Three credits; second semester. Goethe's life and works; Goethe and Schiller; or Wenckebach's Meisterwerke des Mittelalters, with collateral reading.

### FRENCH.

1. **French.**—Four credits; first semester. French grammar and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Text: Fraser and Squair's Grammar.

2. **French.**—Four credits; second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: Super's Reader.

3. **French.**—Four credits; first semester. Readings from nineteenth century writers; Koren's French composition.

4. **French.**—Four credits; second semester. Continuation of French 3.

5. **French.**—Three credits; first semester. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time.

6. **French.**—Three credits; second semester. Open to those who

have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought.

### SPANISH.

1. **Spanish.**—Four credits; first semester. Spanish grammar and composition. Rules of pronunciation and construction. Text: DeTornos' Combined Spanish Method.

2. **Spanish.**—Four credits; second semester. Continuation of Spanish 1. Vocabulary of every day life emphasized.

3. **Spanish.**—Four credits; first semester. Completion of all verb forms. Practice in connected speech. Selected readings from modern authors.

4. **Spanish.**—Four credits; second semester. Conversation on practical topics. Reading of Spanish newspapers and periodicals.

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## History and Political Science

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PROFESSOR HARDING; MISS YOUNG.

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

For History 1 to 6, see the preparatory department.

7. **Medieval History.**—Three credits; first semester. A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-books, papers, reports and practices in application of the fundamental principles used in testing the value of historical material. Text: Robinson's History of Western Europe.

8. **Modern History.**—Three credits; second semester. Continua-

tion of History 7. History of Europe from the opening of the sixteenth century to 1815.

9. **American History.**—Three credits; first semester; prerequisite, History 7 and 8. A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources. (Omitted in 1916-17.)

10. **American History.**—Three credits; second semester. Continuation of History 9. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War. (Omitted in 1916-17.)

11. **Nineteenth Century History.**—Three credits; first semester; prerequisite, History 7 and 8. A study of national development and of international relations between 1815 and 1870, prefaced by a brief survey of the French Revolution and Napolenonic Empire. A detailed study of the Restoration, the Revolution of 1848, the Unification of Italy and the Formation of the German Empire. Text: Hazen's Europe Since 1815.

12. **Nineteenth Century History.**—Two credits; second semester; continuation of History 11. The German Empire; the Third Republic; the Kingdom of Italy; the Near East; England Since 1800; the British Empire in the XIX Century; the partition of Africa; the Far East; Russia and her problems; the causes of the Great War.

13. **American Government.**—Three credits; first semester. General survey of federal, state, and local governments in theory and practice. Emphasis in this course is placed upon real governmental operations. Text book, discussions, and reports. Text: Beard's American Government and Politics.

14. **Political Parties and Practical Politics.**—Three credits; second semester. This course considers such topics as the characteristics and importance of parties, nominating methods, party machinery, campaign methods, party finance, educational and other suffrage qualifications, election laws, the spoils system, civil service reform, machines and bosses, practical politics in legislative bodies, state and local politics, and remedies for legislative evils. Text-book, discussions and reports. Ray's Political Parties and Practical politics.

15. **Economics.**—Three credits; first semester. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

16. **Sociology.**—Three credits; second semester. The fundamental principles of social science. Text-book, supplemented by lectures and special reports. Text: Blackmar and Gillin's Outlines of Sociology.

17. **Rural Sociology.**—Two credits; first semester. A general survey of the field of rural sociology, including the following topics: Types of communities, movements of population, advantages and disadvantages of farm life, social conditions and life of rural peo-

ple, rural health and sanitation, the various social institutions of the rural community, boys' and girls' clubs, farmers' clubs, the grange, the rural church and the rural school, an analysis of the fundamental problems of rural life; the country life movement and the reorganization of rural social forces. Text book, readings, and reports. Text, Gillette's Constructive Rural Sociology.

18. **Rural Economics.**—Three credits; second semester. The economic elements in the production and distribution of agricultural wealth, the agricultural market, determination of price, speculation, business co-operation, credit facilities, ownership and tenancy, farmers' organizations, the farmer and legislation, problems of rural social life, the relation of the farmer to the state. Text-book, lectures, readings and reports.

19. **History of the West.**—Two credits; first semester. A study of the settlement of the West and of the influence of the West upon national development from 1815 to 1860.

20. **History of the West.**—Two credits; second semester. A study of the economic and political development of the West, 1860 to the present.

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## Public Speaking

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PROFESSOR BROWN.

To meet the ever increasing demands of the spoken word as a factor in leadership, and to develop skill in interpretative reading, the following courses are offered:

1-2. **Literary Interpretation.**—Three credits each semester. Voice training, bodily expression, oral interpretation and analysis of the lyric and drama. The aim of this course is to gain a keener appreciation of imaginative literature and to render it naturally and effectively.

3. **Extempore Speaking.**—Two credits; first and second semesters. Student trained to think and express himself while on his feet. Criticism on the organization and presentation of material. Attention is given to gesture, voice and such elements of grace as are essential to effective speaking. (Two sections.)

4. **Extempore Speaking.**—Two credits; second semester. Course 3 continued.

7. **Argumentation and Debate.**—Two credits; first semester. A study of the problems underlying conviction and persuasion. Analysis and briefing of public questions. Development of briefs into forensics and drill in their vigorous presentation. This course is especially recommended to those students who may be looking forward to taking part in intercollegiate debating.



8. **The Speech for Special Occasions.**—Two credits; second semester. A study of form for the special occasion, the speech of the president, the commemorative speech, the speech of dedication, of acceptance, of response, the speech of welcome. In addition to extempore work, written speeches will be required.

9-10. **Public Address.**—Two credits each semester; prerequisite, Public Speaking 3-4. The Rhetoric of Oratory. A study and presentation of the various forms of public address. The writing and delivery of orations. Attention to those elements of psychology which are basic in public speaking.

11-12. **Elementary Public Speaking.**—Four credits each semester. Articulation and flexibility of voice. The study and reading aloud of short poems, extracts from speeches for the development of ease and confidence. Extempore Speaking. Open to the pupils of the School of Agriculture. Elective in the junior or senior year.

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## Education

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**PROFESSOR BRADY.**

The State College receives numerous requests from school officials for teachers for various types of positions. The demand for \*Manual Training teachers, Principals and Superintendents of Agricultural and Industrial High Schools, teachers of Home Economics (Domestic Science and Domestic Art), teachers of Agriculture, and Scientific positions in general—who have professional training in public school matters—is greater than the supply. It is the function of the Department of Education to equip young men and women who are preparing themselves for teachers, with professional training for their work. A student desirous of securing the State Certificate of South Dakota can do so by electing fifteen hours work in the Department of Education (not omitting Educational Psychology). The courses in Education are planned to give a clear grasp of the organization and administration of Public Education with special emphasis on the present theory and

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\*There is a large demand in the High Schools of the northwest at the present time for teachers of manual training in connection with other subjects. Students expecting to teach manual training should complete the following work in Mechanical Engineering: Woodwork, six credits, Mechanical Drawing, three credits, and Forging, two credits.



practice in educational procedure. The purpose is to make all courses concrete and practical.

1. **General Psychology.**—Three credits; first semester. The structure and function of the nervous system; discussions of the several phases of the mental processes with special emphasis upon their origin and functions, and their application to educational development. Lectures, assigned readings, demonstrations and experiments.

2. **Educational Psychology.**—Three credits; second semester. A systematic course treating of fundamental laws of learning in animals and man, the effect of practice, the rate and limits of improvement, the conditions for the most economical learning, the measurement of progress in school subjects, mental hygiene and fatigue, the transfer of training, etc. Lectures, recitations, required readings, experimentation.

3. **History of Education.**—Three credits; first semester. A consistent survey of such periods in the history of educational progress as will serve in the interpretation and solution of our present day problems.—Education in a non progressive versus a progressive society.—The rise of individualism in education, state control and public school systems; evolution of modern High Schools, the elementary school, the kindergarten, vocational education, education of women, the training of teachers; foundations for the scientific, psychological and sociological tendencies of our present day education; the effects of the disciplinary and humanistic conceptions upon educational progress; the contributions to educational theory by Luther, Melancthon, Rousseau, Pestalozzi, Herbart, Froebel, Horace Mann, Spencer, Dewey and others. Lectures, recitations, assigned readings, discussions.

4. **Principles of Teaching.**—Three credits; second semester. An application of the Principles of Psychology to the technique of instruction; observation of the application of these principles in the practice school; discussions of the application of these principles in the various aims and principles of the teaching process, physical welfare of children, moral training, discipline, lesson plans, supervision and its purposes, examinations, etc. Lectures, readings, observations, reports.

5. **School Administration.**—Three credits; first semester. Organization and Administration of Public School systems in the United States. Measurement as a modern scientific instrument of supervision and administration. A brief introduction to statistical method, frequency tables, the application of scientific forms to the measurement of school achievement; fundamental bases for organizing school children, retardation, acceleration and elimination; grading and promotion; special classes; home work; medical inspection; extension of the school activities; special modifications of the course of study; discipline; compulsory education; responsibility of the

schools to the public; comparative systems of education both local and foreign. Lectures, discussions, assigned readings, reports.

6. **Educational Sociology.**—Three credits; second semester. A study of the modern social demands for the re-organization of school systems, of methods of teaching, of courses of study, of the professional training of teachers, and of school equipment. The origin and growth of public sentiment, its importance and influence on social control. Some concrete studies of the principles of interdependence between the school as an institution, and modern social needs as exemplified in recent school survey movements. Some surveys which will receive attention are Minneapolis, Portland, Butte, New York City, Seattle, Bloomington, Ohio, etc. Lectures, discussions, problems and assigned readings.

7. **Educational Measurements.**—Three credits; either semester as demanded. A study of the more recent psychological and pedagogical methods and tests in the measurements of mental and physical development and their bearing upon educational progress. Attention will be given to individual differences in vital capacity, nutrition, growth, sensory and motor discrimination and control, fatigue, blood pressure, attention and association tests, visual and auditory acuity, dermal consciousness, etc. Attention will also be given to standard tests in arithmetic ability, for pedagogical age of intelligence, standards in handwriting, scales in composition and others.

8. **Observation and Practice.**—Four periods per week, either semester. Daily practice and observation in the class room with full charge of a class under competent supervision. Daily lesson plans, carefully criticised, then followed by teaching. A careful study of the best pedagogical literature upon the subject taught. Offered only to seniors who have completed practically the fifteen hours in pedagogy. Elective in the senior year. Students taking this course should arrange in the preceding semester for the work.

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## Mathematics

PROFESSOR BROWN; MR. MILLS.

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstration forming an important part of each course.

For Mathematics 1 to 7, see the preparatory department.

8. **College Algebra.**—Three credits; first semester; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex

numbers, elementary theory of equations, determinants, partial fractions.

9-10. **Plane and Spherical Trigonometry.**—Two credits each semester; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of triangles.

11. **Analytic Geometry.**—Five credits; first semester; required in the Engineering Courses, sophomore year; prerequisite, Mathematics 8 and 9.

12. **Calculus.**—Five credits; second semester; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. **Calculus and Analytic Mechanics.**—Five credits; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solution of mechanical problems.

14. **Analytic Mechanics.**—Three credits; second semester. Continuation of Mathematics 13.

15. **General Astronomy.**—Three credits; second semester; prerequisite, elementary mathematics. The text will be covered and frequent use made of the instruments.

16. **Elementary Mechanics.**—Two credits; second semester; prerequisite, Mathematics 8 and 9.

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## Physics

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**PROFESSOR MATHEWS; ASSOCIATE PROFESSOR HOY.**

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest opera chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are furnished for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscopes, photometers, stereopticon (arc light), standard cells, dynamos, electrometers, transformers, galvanometers, storage batteries, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electro-

meter, Kelvin's current balances, lathe and wireless telegraphy and X-ray apparatus.

The following subjects are offered in this department:

For Physics 1 and 2, see the preparatory department.

3. **General Physics.**—Four credits; first semester. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids, heat and sound with numerous examples. Exact measurements of mass, distance, time, calorimetry, nature and velocity of sound, etc.; study of electrical and magnetic fields.

4. **General Physics.**—Four credits; second semester. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; refraction and reflection of light, interference and color. Laboratory work on topics mentioned.

5. **Advanced Physics.**—Four credits; first semester, prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis. Laboratory work and measurements covering topics mentioned. Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

7. **Heat.**—Four credits; first semester; prerequisite, Physics 5. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity, and dynamical equivalent of heat, laboratory work covering topics mentioned.

8. **Light.**—Four credits; second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

9-10. **Household Physics.**—Two credits each semester; prerequisite, Mathematics 4. Theory of heat, thermometry, calorimetry, transference and conductance of heat, etc. Especial emphasis is laid on practical applications of heat.

11-12. **Practical Physics.**—Three recitations and one laboratory period a week; first and second semesters. This course is open to students in the agricultural groups. The general subjects discussed in physics will be considered but special emphasis will be placed upon topics of practical interest and upon practical application of physical principles.



# Botany and Plant Pathology

PROFESSOR MICHEL; MISS ELLIOTT.

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and function are studied, as well as the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as a foundation for courses in forestry, plant breeding, plant pathology, etc.

The instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are well equipped with microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete, convenient herbaria of the flowering plants and fungous flora of the northern United States.

2. **General Botany.**—Four credits; first semester; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

3. **General Botany.**—Four credits; second semester; prerequisite, Botany 2.

4. **Plant Physiology.**—Four credits; second semester; prerequisite, Botany 2 and 3. The course deals with the most important life processes of the plant, including the properties of living matter; the general physiology of metabolism, growth, reproduction and irritability; the imitation and control of life processes.

5. **Plant Pathology.**—Four credits; first semester; prerequisite, Botany 2 and 3. The first part of the term is devoted to the cause, nature and classification of the fungi, special emphasis being placed on the organisms of economic importance; the latter part of the course is devoted to the morphology of the diseases and their control, especially those found in South Dakota. In the laboratory work the student is, as far as possible, brought into direct contact with the diseases as found in the field.

6. **Advanced Plant Pathology.**—Elective in the junior or senior year. The course will be given to such students as have had Botany 5 or equivalent work. The laboratory hours and the recitations to be arranged with the instructor. The number of credits will depend upon the amount of time given to the work, which will consist of individual laboratory work and assigned readings.

7. **Classification of Pteridophytes, Gymnosperms and Angio-**



**sprems.**—Four credits; first semester; prerequisite, Botany 2 and 3. The systematic arrangement and classification of the ferns and their allies, and especially of the higher flowering plants. The structure and relationship of weeds, grasses and grains, and other plants of economic importance will be emphasized in the course.

8-9. **Plant Histology.**—Four credits each semester; prerequisite, Botany 2 and 3. The work will consist of the embedding, sectioning and staining of tissues from the various groups of plants. Text-book: Chamberlain's Methods in Plant Histology.

10. **Heredity.**—Three credits; second semester. The work is offered in connection with the Department of Horticulture, which will give practical work along the line of plant breeding. This course deals with the principles of variation and heredity, and their bearing upon the theory of organic evolution. The first part of the semester will be devoted to the general principles of heredity and their application to man, the latter half will deal with plant breeding and its practice in this state. Texts: Walter's Genetics and Bailey's Plant Breeding.

11. **Pharmacognosy.**—Four credits; second semester; prerequisite, Botany 2. The sources, characteristics, histology, identification, etc., of the common drugs.

12. **Economic Botany.**—Three credits; first semester. The aim will be to acquaint students with our poisonous plants and with our more common weeds. Numerous field trips will be made in the early fall.

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## Zoology

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**PROFESSOR MILLER.**

Students of Agriculture and Domestic Science as well as those of General Science, should have a thorough foundation in the principles of Animal Biology, and this is what the department aims to accomplish. Besides this it trains the students in methods of zoological research and technique, and attempts to develop original and independent thought.

Students who contemplate the study of human or veterinary medicine will find that it is to their advantage to elect advanced work in the department. These professions are biological sciences and one should have a most thorough training to enter them. For those courses which are the so-called pure scientific courses in medicine credit is usually given and the student is privileged to elect other work in the professional school.

The department is well equipped with apparatus for the courses offered. Microscopes, type specimens, skeletons, for the general courses. Microtomes, ovens, glassware, stains and reagents for the advanced work furnish as excellent equipment as one would wish. There is a small but well chosen working library of about two hundred volumes.

For Zoology 1 and 2, see the preparatory department.

**3-4. General Zoology and Physiology.**—Four credits each semester; prerequisite, Art 1 and all the subjects below the sophomore year.

a. **General Zoology.**—A study of type forms of invertebrates and vertebrates, and the elements of histology and embryology. Texts and references: Galloway's Zoology; Parker & Hoswell; Hertwig.

b. **Physiology.**—This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and references: Pearce & McCord's Physiology; Howell's Physiology.

**5-6. Anatomical Methods.**—Four credits each semester. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to Physiology. Texts: Davidson's Mammalian Anatomy; Riegart and Jennings' Anatomy of the Cat; Morris' Human Anatomy; Grays-Piersol's Anatomy.

**7-8. Histology.**—Four credits each semester; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements, together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's Text-Book of Histology; Wilson's The Cell; Stohrs and Szymonowicz-MacCallum's Text-Book of Histology.

**9. Vertebrate Embryology.**—Three or four credits, first semester. The course includes the study in the laboratory of the processes of fertilization, cleavage, principles of growth, formation of the germ layers and the foetal membranes, as well as the study of the development of some system of organs. For five hours credit the student must prepare a series of microscopical preparations of at least four stages of trout, chick and pig embryos, and make a model of the development of some organ. Students electing this course must have completed Zoology 3 and 4 or 5 and 6, or equivalent. Prentis-Human Embryology; Hertwig Embryology; Man & Mammals.

**10. Bacteriology.**—Four credits, first semester. The course includes the study of morphology and biology of the bacteria and special reference is made to Public Health. The laboratory work

consists of technique and the study of several of the common forms of bacteria. Text: Jordan. References.

11. **Applied Bacteriology.**—Four credits; either first or second semester. Class conferences twice a week. Laboratory work on methods of air, water and soil determination.

12. **Comparative Anatomy.**—Three or more credits, second semester. A comparative study of the skeletal, digestive, vascular, nervous and unorgental systems of the vertebrate. For five hours credit, the student must make a comparative study of the development of some system in three groups, and make models.

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## Entomology and Nature Study

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**PROFESSOR SEVERIN; MR. GILBERTSON.**

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, there is a large number of lantern slides, microscopic slides, and alcoholic and formalin preparations. The department is well provided with all the apparatus necessary for biological work.

For Entomology 1 and 2, see the preparatory department.

3-4. **General Entomology.**—Two credits first semester, three credits second semester. A general course dealing with the anatomy, physiology, embryology, behavior, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

5-6. **Economic Entomology.**—Three credits each semester; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects with a study of insecticides and spraying machinery. The student will be given an opportunity of preparing sprays and gases used in combating insect pests and demonstrations will be offered in the practical application of the same.

7-8. **Systematic Entomology.**—Two or more credits each se-

mester. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give the student an idea of the aims and methods of classification. Each student will be required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

9. **Household Pests.**—Three credits, second semester. The household insects and other animals that are of economic importance will be especially emphasized in this course, together with methods of extermination.

10. **Medical and Veterinary Entomology.**—Two credits, first semester. The greater share of the semester will be devoted to a discussion of the diseases which are disseminated through insects and which affect man and domestic animals.

11. **Bird Study.**—Three credits, second semester. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds, while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's Handbook of Birds of Western North America.

12. **Nature Study.**—Three credits, first semester. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature point of view and the course will be a discussion of methods and materials as well as an elementary science treated from the biological side.

13. **Animal Behavior.**—Two credits, first semester. The evolution of animal behavior forms the principal theme of this course and is of much significance for the study and correct understanding of human psychology and sociology. This course will be useful to those engaged in educational work.

14. **Beekeeping.**—Three credits, first semester. Especial emphasis will be placed upon the practical side of Beekeeping in this course. The laboratory work will deal with a study of Apiary methods, including the manipulation of bees, spring management, swarm control and increase, production of extracted and comb honey, care of bees in winter, apiary apparatus and the anatomy, physiology and development of bees.



# Chemistry

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**PROFESSOR SHEPARD; ASSOCIATE PROFESSOR DUNBAR;  
MR. YOUNGBERG; MR. BINNEWIES; MR. SHERWOOD.**

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, is furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates one hundred and twenty students, all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates sixty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemner quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

**1. Elementary Inorganic Chemistry.**—Four credits, first semester; prerequisite, Physics 2. History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

**2. Elementary Organic Chemistry.**—Four credits; prerequisite, Chemistry 1. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list



of unknowns; the detection of principal organic compounds. Text: Shepard's Elementary Organic Chemistry.

3. **Quantitative Chemistry.**—Three credits, first semester; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores, coal, etc. Text: Olson's Quantitative Chemistry.

4. **Chemistry and Physiology of Foods.**—Four credits, second semester; prerequisite, Chemistry 1 and 2. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulterations. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5. **Agricultural and Sanitary Analysis.**—Four credits, first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.**—Three credits, second semester; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.**—Three credits, first semester; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples, including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaching and dyeing. Text: Thorpe's Industrial Chemistry.

8. **Household Chemistry.**—Four credits, first semester; required in the sophomore year of the Home Economics Course; prerequisite, Chemistry 1 and 2. Students in four year Home Economics Course intending to specialize in Chemistry should take Chemistry 3 instead of Chemistry 8. This course includes the chemistry of cooking, baking, fermentation, cleansing agents, water, soaps, inks, stains, disinfectants, preservatives, etc., as applied to good housekeeping in every day life. Lectures, notes and references.

9. **Organic Chemistry.**—Four credits, first semester. The Aliphatic compounds. Chemical theory and principal compounds of the paraffine series. The preparation of typical members. Typical analytical methods. Text: Perkin and Kipping, with explanatory lectures.

10. **Organic Chemistry.**—Five credits, second semester; a continuation of Chemistry 9. Theory, structure, preparation and analysis of the Benzenes, Naphthalenes, Anthracenes, Pyridines, Alkaloids, Amino Acids, Terpenes, Dyes, etc.

11. **Organic Chemistry.**—Five credits, first semester; prerequi-

site, Chemistry 1, 2 and 3. An elementary course in Organic Chemistry. Includes the general theories, and typical reactions of the aliphatic and aromatic compounds. Preparatory to the practical application of this knowledge in advanced Agricultural work. Text-book: Morris' Organic Chemistry.

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## Pharmacy

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PROFESSOR WHITEHEAD.

### PURPOSE.

The purpose of this department is to train young men and women in the science of pharmacy. The passage of the Food and Drug Act by Congress, and similar legislation by our own state has placed very great importance on pharmaceutical education. Under the present commercial conditions it is nearly impossible for one to prepare himself to meet the requirements of these laws except by taking a thorough college course.

The demand for educated pharmacists is becoming greater every day. In fact, even at present, some of the states will not allow one to take the examination for registration unless he is a graduate of a reputable school. This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

Graduates from the Department of Pharmacy in the State College have been uniformly successful in passing the State Board examinations, only two having failed to meet the requirements of the Board during the past nineteen years.

### ENTRANCE REQUIREMENTS.

Among the regulations of the South Dakota State Board of Pharmacy is the following:

“Hereafter during the year 1906, all applicants appearing for registration by examination, must present with their application an affidavit showing that they have completed a course of study (or its equivalent) of one year high school work. In 1907, two years; in 1908, three years, and in 1909 the presentation of a high school diploma will be required.

These requirements were recommended by the Association in annual meeting at Canton in 1903. It is therefore expedient that all proprietors doing a drug business in this state acquaint their clerks and apprentices with the above rule."

In order to harmonize our work with this regulation we require the completion of four years of high school work or its equivalent. While this is a much higher requirement than most schools demand, we feel that the results have justified our judgment, for at present there are but two of our graduates who have taken the state examination who are not registered.

This line of work offers many inducements to young men. The quests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The students finishing the two year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy. The two years of pharmacy work may all be applied towards the degree of Bachelor of Science. For the additional subjects required, see Pharmacy Schedule. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

The following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy:

1. **Pharmacy Latin.**—Three credits, first semester, first year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Crothers and Biers, Elements of Pharmacy Latin.

2. **Materia Medica.**—Five credits, first semester, second year. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful

treatment. Text: Potter's *Materia Medica*, Pharmacy and Therapeutics.

3. **Materia Medica.**—Five credits, second semester, second year. Continuation of Pharmacy 2.

4. **Pharmacy.**—Five credits, first semester, second year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's *Practice of Pharmacy*.

5. **Pharmacy Laboratory.**—Three credits, first semester, second year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, must be taken up in connection with it. Text: Remington's *Practice of Pharmacy*.

6. **Pharmaceutical Problems.**—Two credits, first semester, first year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's *Pharmaceutical and Chemical Problems*.

7. **Pharmacy.**—Five credits, second semester, second year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's *Practice of Pharmacy*, Ruddiman's *Incompatibilities in Prescriptions*.

8. **Pharmacy Laboratory.**—Four credits, second semester, second year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions. Must be taken same semester as Pharmacy 7. Texts: Remington's *Practice of Pharmacy*, Ruddiman's *Incompatibilities in Prescriptions*, Olberg's *1,500 Prescriptions*, National Formulary.

9. **Volumetric Analysis and Drug Assaying.**—Four credits, second semester, second year; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoeia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's *Volumetric Analysis*, Lyons' *Pharmaceutical Assaying*; lecture notes by the teacher.



## Music

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PROFESSOR HEDGE; ASSISTANT PROFESSOR PETERSON;  
ASSISTANT PROFESSOR CHRISTENSEN; MISS WELCH;  
MISS FERGUSON; MISS SMITH.

### PURPOSE OF THE DEPARTMENT

The purpose of this department is to give the very best musical training possible at a minimum cost, without sacrificing the high standards of the institution.

It is generally recognized that few branches of study require a greater and broader training of the mind than does the study of music, and not only cultivation of the mind, but of the emotions as well. The emotional is a phase too often neglected in education, although it has so important a part in life. In music one must learn to control—to keep in the background—one's own emotions, in order to give true expression to the thoughts of the master minds which have so wonderfully woven the beautiful harmonies.

A knowledge of music also serves to give proper balance to an education, the aesthetic side of which is too often neglected.

Our course is arranged with a view to supplying the needs more especially of those who wish to broaden themselves and to make it a part of their general education.

### ADVANTAGES.

Opportunities are given for the hearing of the best music during the school year, which is a most important adjunct to proper musical education. These occasions include our high-grade faculty concerts, and an Artists' course which consists of recitals by some of the best musicians of the country. It is also planned to bring one of the Symphony Orchestras here for a concert each season.

During the past school year the following concerts, oratorios, and recitals have been given under the supervision of the department of Music: Kaltenborn's Concert Company, assisted by Miss Elsie Baker, contralto, November fifth; "Messiah" by the Choral Union, Dec. tenth; Cantata, "Star in the East" by chapel choir, January ninth; State College



Symphony Orchestra, January twenty-first; State College Ladies' Lyric Quartette, February twentieth; Fourteenth Annual Band Concert, February twenty-fifth; Miss Sylvia C. Clisby, pianist and cellist, April sixteenth; Carl Christensen String Quartette, May fourteenth; Annual Faculty recital, June fifth; Jules Falk, violinist, May twenty-sixth.

"The Messiah" this year was given with local soloists; Miss Laura Ferguson, soprano; Miss Margaret Campbell, contralto; Mr. Gerhart Oyloe, basso and Mr. Garnett Hedge, tenor and director.

By the request of the Watertown (S. D.) Ministerial Association the chorus and orchestra was taken to Watertown January fourteenth to repeat their performance of "The Messiah" there before the largest and most appreciative audience ever assembled in that city.

The State College Military Band also made a most successful concert tour to the Black Hills and received a most enthusiastic reception at each of the nine points visited.

In addition to these advantages, Prof. Hedge will train and direct, free to all College students and to outside singers, a choral union, a chapel choir of twenty-four picked voices, a men's glee club, and a women's glee club.

One credit a year will be given to Juniors and Seniors for choral singing in either Choral Union or Chapel Choir, provided the work is carried the full school year.

Professor Christensen will conduct the College bands and orchestra, both of which have already made an excellent reputation throughout this part of the country.

The Men's Glee Club and Orchestra have made tours during the last three years through different parts of the state and have met with great enthusiasm and success.

Recitals are also required of all students at various times during the year and attendance is obligatory upon every student in this department.

### CONDITIONS FOR ENTRANCE.

The candidate for admission to the College must be at least fourteen years of age and of good moral character, and must have completed the work of the public schools as far as the ninth grade.

Students of music who have not completed the requirements for entrance to the freshman class will be required to take at the same time two text book subjects of the preparatory course.

### STUDENTS' CONVOCATION

The Music Students Convocation meets once each month at which programs are given by students or faculty. As this is part of the school work each student of music is required to be present.

### COURSES.

Three courses are available for students of this department:

1. Preparatory.
2. Academic.
3. Collegiate.

The Preparatory Course is open to all beginners and consists of rudiments, tone production, formation of correct habits of thought and execution, etc.

The Academic Course is for those who do not desire to complete the full course, but only to become fairly proficient as performers and to secure a general knowledge of the fundamental principles of the art. At the completion of this course, the student is awarded a certificate of proficiency or merit.

The Collegiate Course leads to graduation and consists of three years' work. To complete this course, the student must have secured a thorough knowledge of harmony, theory and history as outlined in these respective courses. Upon its completion, the student will be given a diploma in music, provided the entrance requirements to the freshman class have been completed.

For convenience, music students who have completed the entrance requirements to the Freshman class and one year of the Collegiate course in music will be ranked as though they were carrying full college work, provided that in addition to the full Collegiate course in music they carry other college work amounting to twelve credits. In such work of the department as may be sufficiently advanced, college

credit will be given and a reasonable amount counted towards the completion of the requirements for the Bachelor's degree.

PROF. HEDGE; MISS FERGUSON.

## VOICE.

The method used is the correct placing of the voice so that the pupil can produce with equal ease and firmness and with an even quality, all tones from the lowest to the highest. The mechanism of the voice is explained as far as necessary.

In correct breathing, correct position in singing and chest development lies the foundation of voice building.

The course of instruction is based on the Italian School of training the voice. The fundamental principle of the old Italian teachers was to poise the voice. From this comes the even scale, the range, the power to sustain, and the agility, all of which combined formed the "bel canto" or beautiful singing.

Special attention is paid to the needs of each individual, with exercises and studies carefully selected according to the requirements of each voice.

Study will be made of the interpretation of songs and ballads chosen from the best of the German, Italian, French, English and American schools, with strict attention to phrasing, enunciation and rhythm.

### Voice Outline.

First Year.	Second Year.	Third Year.
Vocal Culture.	Vocal Culture.	Vocal Culture.
Piano	Piano.	Song Literature.
Sight Reading.	Harmony.	Theory.
Musical History	Languages.	Church Music.
Languages.	Ear Training.	Hymnology and
Songs.	Songs.	Oratorio, Opera Airs.
		Harmony.

### First Grade.

The formation of tone; elementary exercises for the development of the voice and art of respiration; Seiber's thirty-six eight measure vocalises; exercises in articulation and art of phrasing; easy and pleasing songs in English.

### Second Grade.

Exercises in scales, precision and flexibility; studies by Lutgen, Coneone, Tosti, Vacchi; songs from German and English composers.

### Third Grade.

Exercises in scales, precision and flexibility continued; advanced vocalization; songs by Schubert, Schumann, Franz, Brahms, and arias and duets from operas.

### Fourth Grade.

Exercises continued as above with studies in bravoura singing. Exercises and solfeggios used, classified according to difficulty, are those of Coneone, Marchesi, Lamberti and Brambilla. Recitatives and arias from the standard oratorios and operas.

For the Diploma in vocal music, the pupil must complete the courses in harmony, theory and history of music, ear training and sight reading, and must also complete the work of the academic course in instrumental music.

## PIANO.

**MR. PETERSON; MISS WELCH; MISS FERGUSON.**

The study of piano is conducted with a view to balancing more perfectly the training of the mind and the cultivation of technical power. Too often stress is placed upon one or the other, more frequently the latter, to an extreme. Technique is but the means to an end; i. e., the correct interpretation of the masters, and should be so considered.

Special attention is directed from the very beginning to the student's habit of thinking. This is done largely through the method of harmonic analysis and memorizing in an orderly and concentrative manner.

The musical side of the student's personality is brought into action through intelligent and artistic interpretation and its development is materially assisted by his having the opportunity to hear good music, artistically rendered as often as possible.

In technical development, special work is given for the acquisition of finger strength and independence, a correct po-



sition of the hand and purity of tone. Since it is now generally believed that the purest and sweetest tones are secured from direct finger action, this is much emphasized throughout the course.

These fundamental ideas are associated with the principle, the understanding of which is so necessary to the successful teacher, that efforts should continually be made to render the study of the piano less irksome and as intensely interesting to the student as it can be made.

### Piano Outline.

First Year.	Second Year.	Third Year.
Piano.	Piano.	Piano.
Harmony.	Harmony.	Harmony.
Musical History.	Violin or Voice.	Violin or Voice.
Musical Literature and Analysis.	Ear Training. Theory.	Ensemble Playing.

### Preparatory Course.

Studies from Czerny, Gurlitt, MacDougall, Bach and other composers; sonatinas from Clementi, Kuhlau, Gurlitt, etc.; the easier sonatas of Haydn and Mozart, and the less difficult compositions of Schumann, Grieg, MacDowell, Schubert, Chopin and others.

### Collegiate Course.

**First Year.**—Etudes of Heller, Czerny, Foote; selections from the Bach suites and sonatas of Beethoven, Haydn and Mozart; compositions of Mendelssohn, Schubert, Chopin, Schumann, Grieg, MacDowell, etc.

**Second Year.**—Studies from Bach, (inventions and suites), Heller, Czerny, and others; sonatas of Mozart and Beethoven; solos selected from Weber, Chopin, Mendelssohn, Schumann, Grieg, MacDowell, Liszt and others; also some of the easier concertos of Mendelssohn, Reinecke, Weber, Mozart, etc.

(For examination last year, students played a movement from Mendelssohn's Concerto in G Minor, a Bach Fugue and an expression piece selected from some of the composers of the Romantic School.)

**Third Year.**—Studies from Bach (Well Tempered Clavichord), Chopin, Liszt, Foote; sonatas of Schubert, Beethoven, Grieg, Weber, Chopin; solo works of Mendelssohn, Weber, Schumann, Liszt, Rubinstein, Grieg, MacDowell and the modern French, Russian and American composers; concertos of Beethoven, Rubinstein, Chopin, Schumann, Saint Saens, etc.



**VIOLIN.****MR. CHRISTENSEN.**

Position, tone production on open strings, most important rudiments of musical theory in general, Hohmann's Violin School, Book 1; duets by Gebauer and Mazas; miscellaneous solos with piano accompaniment.

**Collegiate Course.**

**First Year.**—Two octave scales in all major and minor keys; Seveik, Opus 1, Book 1, Violin Technic; study of the positions, Hohmann, Book IV; studies by Wohlfart, Opus 45, Books I and II; miscellaneous solos with piano accompaniment.

**Second Year.**—Three octave scales in all major and minor keys; Seveik, Opus 7, Violin Technic, Books I and II; Seveik's "Four thousand Bowings;" Kayser's Etudes, Opus 20, Books I and II; Mazas, Opus 36, Book 1, Violin Studies; solos with piano accompaniment by DeBeriot, Wieniawski, Mendelssohn, etc.

**Third Year.**—Seveik, Opus 7, Books I and II; Seveik's "Four thousand Bowings;" Schradieck's Technical Studies; Mazas Studies, Opus 36, Book II; etudes by Dont and Kreutzer; solos by Wieniawski, Vieuxtemps, Mendelssohn, Bruch, Godard, etc.; concertos by Paganini, De Beriot, etc.

**Violin or Viloncello Outline.**

First Year.	Second Year.	Third Year.
Violin or Cello.	Violin or Cello.	Violin or Cello.
Harmony.	Harmony.	Harmony.
Piano.	Piano.	Ensemble Playing.
Musical History.	Musical Literature and Analysis.	
	Ear Training.	
	Theory.	

**HARMONY.****MR. PETERSON.**

In the study of harmony, the older ideas of harmonizing a given melody or figured bass are discarded as far as possible. The student is taught from the beginning to write his own melodies for harmonization, thus, while stimulating his originality and inventive ability, taking from the study of harmony that mechanical and superfluous aspect so often too apparent to the pupil, and firmly establishing its proper place in the study of music.

In the first year (collegiate) the student receives ear training and the rudiments of harmony, including intervals, scales and chord formation, chords and their tonal relations, melody writing and simple harmonization.

In the second year, melody writing is continued, harmonization a little further developed, new chords introduced, etc.

The third year leads to altered chords and modulation, elaboration of melody, imitation, counterpoint, canon, fugues and composition in the easier forms.

This study is generally conducted in classes of four or five, but those who desire quicker advance may secure private lessons at special rates, according to the statement upon another page.

### **HISTORY.**

The classes in the study of musical history are conducted by Miss Welch. This clearly follows the development of music and musical instruments from the earliest to the present time. This is a subject upon which every musical student should be well grounded, and some knowledge of it is essential in the general educational equipment of everyone who is at all musically inclined. An examination upon this subject must be passed by all students before receiving certificates or diplomas.

### **THEORY.**

The study of theory is conducted by Mr. Peterson. This study includes the principles of acoustics and formation of sound, together with a study of analysis of musical forms; simple songs, forms, arias, ballads, and other vocal forms; the more simple forms of dance music, leading to the higher forms of the sonatina and sonata, canon, fugue, etc.

This study is also required of all students receiving certificates or diplomas.

### **EAR TRAINING.**

A special class in ear training and sight reading is to be included in the course for the coming year, to be conducted by a capable and experienced teacher. This study will be required of all music students.

**EXPENSES OF STUDENTS.**

The tuition for regular work throughout the year is listed in the table of fees below and depends upon the instructor, subjects studied, etc.

The terms and prices to the student of the five months' course in Agriculture will be the same as that for the regular semester, as given below.

**FEES.**

The following fees will be charged a semester for instruction:

**Prof. Hedge.**

Voice—

Two half hour lessons per week, major work.....\$32.00

One half hour lesson per week, minor work..... 18.00

**Mr. Christensen.**

Violin, Viola, Cello and Band Instruments—

Two half hour lessons per week, major work.....\$28.00

One half hour lesson per week, minor work..... 17.00

**Mr. Peterson.**

Piano—

Two half hour lessons per week, major work.....\$28.00

One half hour lesson per week, minor work..... 17.00

**Miss Welch.**

Piano—

Two half hour lessons per week, major work.....\$26.00

One half hour lesson per week, minor work..... 15.00

**Miss Ferguson.**

Voice and Piano—

Two half hour lessons per week, major work.....\$26.00

One half hour lesson per week, minor work..... 15.00

Harmony, history, theory, ear training, sight reading, etc., in classes, free to all students in voice, piano or violin.

Private lessons in harmony may be obtained for the additional fee of \$10.00 a semester. Students desiring private lessons in harmony and studying in more than one department, for example, both voice and piano departments, will be given a discount of \$5.00 a semester to cover the free theoretical work to which they are entitled in each of these departments.

Practice pianos may be used at the following rates a semester:

One hour a day, \$4.00.

Two hours a day, \$7.00.

Three hours a day, \$9.50.

Four hours a day, \$12.00.

# Art

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MISS CALDWELL; MISS GODDARD.

The aim in arranging the subjects in this department has been to offer such work as will correlate with other college courses in becoming a means to a general education.

The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs and with such tools as are necessary for class work.

Two courses of study are offered, the preliminary work in each being the same. One course includes the study of form and color, and the other the principles of design and their application in various crafts. A diploma is given student who satisfactorily complete either course. The time necessary to secure a diploma depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course. The course in academic drawing and painting includes drawing from cast and still life, painting and art history, (courses 6, 7, 8, 9, 10, 11, 12, 13). The course in applied design includes a year of drawing, two years of design and handicraft with a year of art history, (courses 4, 5, 6, 7, 8, 9).

Any advanced student wishing to study the technique of pen and ink will be given individual instruction in that subject.

For Art 1 and 2 see the preparatory department.

3. **Theory of Design.**—One credit; second semester. This subject treats of the principles of design and their practical application in the home.

4-5. **Applied Design.**—Two credits each semester; prerequisite Art 1. One period a week for lecture and criticism of original designs and three periods for the working out of these designs in the various crafts of basketry, stenciling, weaving, leather, wood carving, metal work and jewelry. Students wishing a diploma are required to continue the study of design for a second year and study the principles of the crafts they have not included in their first year's study of applied design.

6. **Art History.**—Two credits; first semester. This course is



to acquaint the student with the styles of historic architecture and with prominent buildings illustrative of each style.

7. **Art History.**—Two credits; second semester. A study of great schools of painting. Reference books in the general library and a collection of photographs in the department furnish material for this course.

8. **Charcoal Drawing.**—Two credits; first semester; elective to students pursuing special work in art. Drawing from simple casts in outline and in light and shade.

10. **Charcoal Drawing.**—Two credits; first or second semester; elective to students pursuing special work in art. Drawing of heads and figures in full light and shade from casts, sketching from pose; prerequisite, Art 8.

1. **Study of Values.**—Two credits; first or second semester; elective to students pursuing special work in art. Value studies in charcoal from still life as preparatory work for painting; prerequisite, Art 1-2.

12-13. **Painting.**—Two credits each semester; elective to students pursuing special work in art; prerequisite, Art 8. Study of color and technic of painting in oil, pastel, and water color from still life and flowers.

14-15. **Drawing.**—One credit each semester. This course will include object and nature drawing with pencil and colored crayon, or the study of proportion, perspective, light and shade, and pencil technic, thus enabling the student to express the appearance of objects.

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## Military Science and Tactics

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**LIEUTENANT DITTO, Commandant.**

The work of this department is conducted in accordance with War Department orders promulgated pursuant to Acts of Congress.

Instruction in military science and tactics in educational institutions throughout the United States forms a part of the present general system of military training; its function is to impart to the college youth of the land knowledge of the elements of military science and the duties of the soldier in thearrison and in the field in order that the people may receive the benefit of more efficient service when final resort to arms to sustain the national honor or to enforce the laws shall become necessary.



Direct benefits of lasting value are received by the individual cadet which contribute to strengthen his physique and mentality, the better to fit him for the duties of life.

All men students below the Junior year are required to take infantry drill regulations throughout the year, for which one credit each semester is given. A one credit course is also required as indicated below.

Further advanced work may be elected with appropriate credit, subject to the approval of the faculty.

All students herein referred to constitute the corps of cadets and are organized for the purpose of drill and administration as an infantry battalion, with a band to which qualified cadets are specially assigned.

The appointment and promotion of commissioned and non-commissioned officers are made in accordance with merit by the commandant subject to the approval of the president.

The College is provided by the U. S. government with the equipment necessary to conduct the department. Each cadet must provide himself with the prescribed uniform. The complete uniform will be worn at all drills and other exercises.

The following is an extract from war department orders:

"Upon the graduation of every class, the professor of military science and tactics, after consultations with the president of the college \* \* \*, will decide upon and report to the Adjutant General of the Army the names of such students belonging to the class as have shown special aptitude for military service, and will furnish a copy of his report to the Adjutant General of the state for his information."

The work is as follows:

**Military Drill.**—Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty. Three hours a week; required of all able bodied male students of the sophomore, freshman and preparatory classes, the school of agriculture, and special students; optional for seniors and juniors, who may elect further work in the department subject to approval; they may also be required to turn out on special occasions by direction of the commandant upon approval of the president.

1. **Military Science.**—One credit. Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty; army regulations. This course is progressive and required for commissioned and non-commissioned officers, one hour a week, one semester, or equivalent. Lectures by the Commandant on various military subjects will be delivered monthly before all

cadets. Additional requirement for sophomores, one hour a week, second semester.

2. Field Service Regulations and Military Engineering. One credit; first semester.

3. Applied Tactics. Two credits; second semester.

4. Military Law. One credit, first semester.

5. International Law. One credit; first semester.

6. Military Hygiene. One credit; second semester.

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## Department of Commerce

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### PROFESSOR SCHLATTER.

The department of commerce offers two courses of study:

(1). The Secretarial course for students who have completed a high school course of two or more years. The work of the course may be counted towards the completion of the entrance requirements to the freshman year of the college, under certain restrictions imposed by the committee on entrance requirements—and also depending upon the additional work that has been done by the student. However, it frequently happens that such students have no intention of pursuing a regular collegiate course of study, but are obliged by force of circumstances to take a one-year's business course preparatory to office work. These students welcome the opportunity of securing a commercial education in a college atmosphere.

(2). The regular commercial course combines preparatory subjects with business branches and covers a period of four years. This course is valuable to the student who desires to obtain a broad general knowledge with his commercial training. The student also gets regular credit for the work toward admission to the freshman year of college, in case he wishes to continue his education. Many students, in fact, take the business subjects in order to learn some method of earning their future college expenses.

All stenographic courses are so arranged that students are given considerable actual office practice during the second semester just before completing the course. The idea is to train the student for immediate service in office work, and to minimize the customary bungling of the beginner.

The demand of our graduates far exceeds the supply.

Hardly a week passes that we are not asked to recommend some young man or woman for office work. There are usually three to five positions for every student.

Brookings is now a regular point for the holding of Civil Service examinations. Students who desire to take the examinations are encouraged to do so and are given all the preparation possible.

Those who have not completed the equivalent of at least three years of a high school course should follow the course in commercial science as outlined in the schedule of the preparatory department. Shorthand students are required to have had a preliminary English training of about two years.

Under certain restrictions, collegiate students are permitted to take electives in Business Law, Theory of Money and Banking, and Economic Geography.

### THE SECRETARIAL COURSE

#### First Semester

	Credit
Business Law, Commerce 9 .....	3
English, English 5, 7, or 9 .....	3 or 5
Shorthand, Commerce 5.....	5
Typewriting, Commerce 6 .....	5
Accounting, Commerce 11 .....	3

#### Second Semester

	Credit
English, English 6, 8, or 10 .....	3 or 5
Shorthand, Commerce 7 .....	5
Typewriting, Commerce 8 .....	3
Secretary Practice, Commerce 14.....	5
Money & Banking, Commerce 10 .....	
or	
Accounting, Commerce 12 .....	
or	
Economic Geography, Commerce 13 .....	3

### THE REGULAR COMMERCIAL COURSE.

The following subjects are offered in the regular-four year course in commercial science. For complete schedule and outline of preparatory course.

1. **Commercial Correspondence.**—Three credits; first semester three recitations a week. A practical course designed to teach student to write creditable and up-to-date business letters in natu

and conversational English. Particular attention will be paid to penmanship.

2. **Commerce and Industry.**—Three credits; second semester; three recitations a week. Study of industry and commerce, local, national, and international. This course will be illustrated by the use of a commercial museum now being collected. The student will be required to learn the use of government reports and other sources of information in collecting data.

3. **Bookkeeping.**—Three credits; first semester; three laboratory periods a week. Single and double entry studied as in actual business; the aim being to acquaint the student with the fundamental principles of bookkeeping. Students who are deficient in penmanship will be required to take course 1.

4. **Bookkeeping.**—Three credits; second semester; three laboratory periods a week. Advanced bookkeeping, affording practice with the more complex books and forms used in modern offices. Special attention given to the accounting books of commission, general merchandise, wholesale and retail business, manufacturing and banking. By the use of separate price lists, each student will be obliged to do independent study and thinking. In this course the student becomes familiar with the uses of various kinds of commercial paper and office practice.

5. **Shorthand.**—Five credits; first semester; five recitations a week. In this course the student masters the theory of shorthand; dictation of simple business letters to develop facility in handling writing materials; drills on principles, characters and word-signs. Gregg shorthand is taught. Nothing but the very best work is accepted, for it is time wasted to prepare second and third rate stenographers for office work.

6-8. **Typewriting.**—Two credits; second semester; five laboratory periods a week. Graded exercises to learn machine by touch method; care of machine; correspondence and legal forms; manifold and mimeographing; billing and tabulating. The work of the second semester will be based upon shorthand dictation. The student will be required to develop the ability to read and transcribe his notes readily and accurately. Each student is to collect a portfolio of his typewritten work which has been accepted by the instructor of typewriting.

7. **Shorthand.**—Five credits; second semester; five recitations a week. Dictation of business letters and general matter to develop speed; legal forms; civil service matter. The student is not allowed to develop speed carelessly, at the expense of legibility. With this course, the student makes a study of commercial correspondence and the most approved forms in letter composition. All dictated matter is transcribed on the typewriter.

9. **Business Law.**—Three credits; first semester; three recitations a week. Designed to acquaint the student with the fundamental principles of business law, supplemented with a study of



actual cases illustrative of these principles. A topical analysis of contracts; negotiable paper; agency; partnership; corporations; guaranty; sale of chattels; bailment; insurance.

**10. Money and Banking.**—Three credits; second semester; three recitations a week. Alternate with commence 13. A theoretical and practical study of the history of money; nature and uses of money; classification of banks; bank circulation; deposits and loans; officers of banks; collection; reserves; legal regulations; clearing houses; loan and trust companies. Open to fourth year preparatory, secretarial, and college students only.

**11-12. General Accounting.**—Three credits each semester. It is the purpose of this course to acquaint the student with the different forms of industrial organizations, and the nature and analysis of their business transactions. The theory of the exchange of values and that of debits and credits are studied. Attention is given to the correct classification of business interests into their proper accounts with special reference to their relations in the different kinds of statements. Text: Langer's General Accounting.

**13. Economic Geography.**—Three credits; second semester; alternates with Money and Banking; will be given in 1916-17. A practical study of the geography of production. The following topics are studied as thoroly as possible in the limited time given to this subject: Regions of production and consumption of grains; fruits; sugar; tea; coffee; and cacao; cotton; wool; beef and dairy products; swine; fisheries; forest; coal; petroleum; iron and steel. Also some time is given to the study of manufacturing industries, origin and basis of trade, ocean and land trade routes, commercial centers, and types of commercial nations. This subject is especially desirable to those students who expect some time to be able to judge trade and market conditions intelligently. Text: Smith's Industrial and Commercial Geography.

**14. Secretary Practice.**—Five credits; second semester. Afternoon practice with college offices or business firms in town. Also a great deal of practice in taking letters, etc., and transcribing them on the typewriter is given in the class room. The practice will be of great value in giving preliminary experience, and will remove the fear of entering the first regular office work upon graduation.

**15. Industrial Publicity.**—Two credits; first semester. A course offered by the Publicity Department for students in Agriculture, home economics, engineering and other groups aiming to give the fundamentals in journalism, with especial reference to writing articles for trade and technical publications. The course will embrace the study and practice of newspaper style of writing, writing for farm papers, women's publications, and technical journals. The final three weeks of the course will be spent in a



study of writing advertisements of farm and other industrial products.

Offered in first semester to Juniors and Seniors provided a sufficient number of students elect this course.

## Preparatory Department

### PROFESSOR FORSEE.

For the benefit of students who do not have high school advantages a preparatory department is maintained. This course, whose work extends over four years, contains certain required subjects that are considered necessary to a liberal education. The remaining work may be chosen from a large list of elective subjects. The student who pursues the course may thus secure a good preparation for entering upon more advanced work or a training for practical life.

The course conforms to the admission requirements as far as the conditions in the College permit. Students will be admitted to the college courses upon the completion of the required subjects and an additional amount of work chosen from the elective subjects to make fifteen units, a unit being five hours a week throughout the year. This requires about three hours of elective work a week in addition to the required subjects during the four years. In addition to the requirements outlined below, all students will be required to attend and take part in literary society work, for which they will receive reasonable credit.

### PREPARATORY COURSE

#### First Year

##### First Semester—

	Credits
English Composition, English 1 .....	5
Arithmetic (Including Metric System), Mathematics 1...	5
Civics, History 2 .....	5
Business Correspondence and Penmanship, Commerce 1	
or	
Freehand Drawing, Art 1.....	3
Military Tactics .....	1
Elective .....	3

##### Second Semester—

English Composition, English 2.....	5
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	Credits
Beg. Algebra, Mathematics 2 .....	5
Physiography, Physiography 1 .....	4
Commerce and Industry, Commerce 2 .....	
or	
Freehand Drawing, Art 2 .....	3
Military Tactics, 3 .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

### Second Year

#### First Semester—

English Composition and Rhetoric, English 3 .....	5
Algebra, Mathematics 3 .....	5
Elementary Biology, Entomology 1 .....	5
Military Tactics .....	1
Elective .....	3
Carpentry, Mechanical Engineering 1 .....	3
Elementary Agriculture, Agricultural 1 .....	3
Sewing, Home Economics 1.....	3
Bookkeeping, Commerce 4 .....	3
Business Correspondence, Commerce 1 .....	3
Typewriting, Commerce 6 .....	2

#### Second Semester—

Freehand Drawing, Art 2 .....	3
Forging, Mechanical Engineering 2 .....	3
Elementary Agriculture, Agriculture 2 .....	3
Cooking, Home Economics 2 .....	3
Bookkeeping, Commerce 4 .....	3
Typewriting, Commerce 8 .....	2
Commerce and Industry, Commerce 2 .....	3

### Third and Fourth Years

#### First Semester—

Freehand Drawing, Art 1 .....	3
Sewing, Home Economics 1 .....	3
Carpentry, Mechanical Engineering 1 .....	3
*Shorthand, Commerce 5 .....	5
Elementary Agriculture, Agriculture 1 .....	3
Typewriting, Commerce 6 .....	3
Elementary Physiology, Zoology 1 .....	5
Mechanical Drawing, Mechanical Engineering 5 .....	3
Business Law, Commerce 9 .....	3
Bookkeeping, Commerce 3.....	3
Solid Geometry, Mathematics 7.....	3

#### Second Semester—

Freehand Drawing, Art 2.....	3
Home Economics 2.....	3
Commerce 4.....	3

	Credits
Forging, Mechanical Engineering 2.....	3
Mechanical Drawing, Mechanical Engineering 5 .....	3
Typewriting, Commerce 8 .....	3
*Shorthand, Commerce 7 .....	5
Elementary Agriculture, Agriculture 2 .....	3
Elementary Physiology, Zoology 2 .....	3
Money and Banking, Commerce 10.....	3
<b>Second Semester—</b>	
English Composition and Rhetoric, English 4 .....	5
Algebra, Mathematics 4 .....	5
Elementary Biology, Entomology 2.....	5
Military Tactics .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

### Third Year

<b>First Semester—</b>	
American Literature, English 5 .....	5
Plane Geometry, Mathematics 5 .....	4
German, German Pr 1 .....	5
Greek History, History 3 .....	3
Military Tactics .....	1
Elective .....	3

<b>Second Semester—</b>	
American Literature, English 6 .....	4
Plane Geometry, Mathematics 6 .....	4
German, German Pr 2 .....	5
Roman History, History 4 .....	3
Military Tactics .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

### Fourth Year

<b>First Semester—</b>	
English Literature, English 7 .....	3
Elementary Physics, Physics 1 .....	5
German, German Pr 3 .....	5
American History, History 5.....	3
Military Tactics .....	1
Elective .....	3

<b>Second Semester—</b>	
English Literature, English 8 .....	3
Elementary Physics, Physics 2.....	5
German, German Pr. 4.....	5
American History, History 6.....	3

\*Students taking Shorthand will be allowed to substitute typewriting for Greek History and Roman History, or for English History and American History.

Military Tactics .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

### PREPARATORY ELECTIVES

#### First and Second Years

##### First Semester—

Freehand Drawing, Art 1 .....	3
Carpentry, Mechanical Engineering 1.....	3
Elementary Agriculture, Agriculture 1.....	3
Sewing, Home Economics 1.....	3
Bookkeeping, Commerce 4.....	3
Business Correspondence, Commerce 1.....	3
Typewriting, Commerce 6.....	2

##### Second Semester—

Freehand Drawing, Art 2.....	3
Forging, Mechanical Engineering 2.....	3
Elementary Agriculture, Agriculture 2.....	3
Cooking, Home Economics 2.....	3
Bookkeeping, Commerce 4.....	3
Typewriting, Commerce 8.....	2
Commerce and Industry, Commerce 2.....	3

#### Third and Fourth Years.

##### First Semester—

Freehand Drawing, Art 1.....	3
Sewing, Home Economics 1.....	3
Carpentry, Mechanical Engineering 1.....	3
*Shorthand, Commerce 5.....	5
Elementary Agriculture, Agriculture 1.....	3
Typewriting, Commerce 6.....	3
Elementary Physiology, Zoology 1.....	5
Mechanical Drawing, Mechanical Engineering 5.....	3
Business Law, Commerce 9.....	3
Bookkeeping, Commerce 3.....	3
Solid Geometry, Mathematics 7.....	3

##### Second Semester—

Freehand Drawing, Art 2.....	3
Cooking, Home Economics 2.....	3
Bookkeeping, Commerce 4.....	3
Forging, Mechanical Engineering 2.....	3
Mechanical Drawing, Mechanical Engineering 5.....	3
Typewriting, Commerce 8.....	3
*Shorthand, Commerce 7.....	5
Elementary Agriculture, Agriculture 2.....	3
Elementary Physiology, Zoology 2.....	3
Money and Banking, Commerce 10.....	3

\*Students taking Shorthand will be allowed to substitute type-writing for Greek History and Roman History, or for English History and American History.

## School of Agriculture

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### PROFESSOR STIVERS.

The School of Agriculture has for its specific purpose the training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farm and in the homes to help the parents during the busy season of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

While the subjects of study consist primarily of those that relate to farming and household economy, they include also such subjects as are usually given in a regular high school course. For example, English, mathematics, history, civics, chemistry, physics and biology. The technical topics include studies in soil, plants and crops, domestic animals, feeds and feeding, cooking and sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Demonstrations are given in the class rooms, laboratories, kitchen and sewing rooms, barns, greenhouses, orchards and fields.

The School of Agriculture welcomes earnest and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

The tuition is six dollars for the year, with a small fee for each laboratory in which work is taken.

### COURSES OF STUDY.

Following are the schedules of the courses of study. The academic studies are practically the same for men and women.



The courses are differentiated only in such points as are related to their specific spheres in life's work.

### FOUR-YEAR COURSE FOR YOUNG MEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of time week, "a" meaning class work, "b" laboratory work.

#### First Year

Penmanship and Spelling .....	
English .....	
Arithmetic or Algebra .....	
Poultry Culture .....	
Farm Crops .....	a 3,
Stock Judging .....	
Horticulture .....	
Carpentry .....	
Lectures on Science .....	
Military Drill .....	

#### Second Year

English .....	
Algebra .....	
Farm Accounts .....	
Plant and Animal Life .....	
Dairying .....	a 1,
Breeds and Breeding .....	a 2,
Horticulture .....	
Blacksmithing .....	
Military Drill .....	

#### Third Year

English .....	
Plane Geometry or Algebra .....	
Civics .....	
Elementary Chemistry .....	a and
Farm Machinery .....	
Entomology .....	a 1,
Stock Feeding .....	
Military Drill .....	

#### Fourth Year

English .....	
History (including lectures on Co-operation) .....	
Geometry .....	
Elementary Physics .....	a 2,
Physiology .....	

Cement Construction .....	b 2
Veterinary Science .....	a 3
Soils .....	b 3
Military Drill .....	3

### FOUR-YEAR COURSE FOR YOUNG WOMEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of times a week, "a" meaning class work, "b" laboratory work.

#### First Year

Penmanship and Spelling .....	a 2
English .....	a 4
Arithmetic or Algebra .....	a 4
Freehand Drawing .....	b 2
Poultry Culture .....	a 2
Cooking .....	a 1, b 3
Sewing I .....	b 3
Dairying .....	b 1
Horticulture .....	b 1
Lectures on Science .....	a 2
Art Needlework (Elective) .....	b 1
Physical Training .....	3

#### Second Year

English .....	a 4
Algebra .....	a 4
Household Accounts .....	b 1
Plant and Animal Life .....	a 5
Food, Dietetics and Serving .....	a 1, b 2
Household Management .....	a 1
Art Needlework (Elective) .....	b 1
Craft .....	b 1
Physical Training .....	3

#### Third Year

English .....	a 4
Plane Geometry or Algebra .....	a 4
Civics .....	a 3
Elementary Chemistry .....	a and b 4
Textiles and Sewing II, Laundering .....	a 1, b 3
The House .....	a 2
Craft .....	b 1
Art Needlework (Elective) .....	b 1
Physical Training .....	3

#### Fourth Year

English .....	a 4
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History (including lectures on Cooperation) .....	a 4
Geometry .....	a 4
Elementary Physics .....	a 2, b 2
Physiology .....	a 2
Sewing III and Millinery .....	b 2
Advanced Cookery and Invalid Cookery .....	a 1, b 2
Home Nursing .....	a 2
Art Needlework (Elective) .....	b 1
Physical Training .....	3

## The Summer School

**PROFESSOR STIVERS, Director.**

For a number of years the College conducted a short summer session in conjunction with the Brookings County Teachers' Institute. In 1914 the College authorities felt that the time had come for the College to extend its summer work to a session of six weeks. The results were very gratifying, for after the close of the teachers' institute, a large number of students remained to continue their work in the College.

In 1915 two hundred regular six weeks' Summer School students enrolled. Five counties united in a Joint Institute during the first two weeks of the session. The total enrollment for Summer School and Institute was six hundred.

The work of the summer sessions is planned especially for those who wish to take work along industrial lines—in Agriculture, Manual Training, Home Economics and allied subjects—either for the purpose of preparing themselves to teach in the public schools, or to secure College credits. The College offers many advantages to the public school teachers of the state. During the last few years the demand for teachers of vocational subjects has increased much more rapidly than the supply. Here the student has the opportunity of getting practical training along with the theoretical work by having access to the laboratories, shops, and other equipment of the College.

In addition to the members of the regular College staff a number of special instructors and lecturers are employed to give instruction during the session.

The 1916 Summer Session will begin June 12th. In con-

nection with the Session a Joint Institute of Miner, Moody, Hamlin, Kingsbury, Codington and Brookings counties will be held, beginning June 12th and closing June 23rd. Those wishing detailed information concerning the Summer Session or Joint Institute should write to the President for the Summer School bulletin.

### **THE FARM AND HOME COURSE.**

This course, which will be given during the Christmas vacation, will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects. Write to the College for further information.

### **THE THREE MONTHS' CREAMERY COURSE.**

**January 3 to March 27.**

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending College, as by this means it is found that much greater benefit is derived from the work at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demands a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the "reason why" for many of our daily operations. The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from \$50 to \$125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered :

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and bookkeeping.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

The tuition is four dollars for the three months' term with a small additional fee for laboratory expenses.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

### **COURSE IN TRACTION ENGINEERING.**

**January 3 to June 1.**

Modern agricultural methods have introduced the steam and gas engine, as a substitute for animal power, in such a marked degree, that the consequent growing demand for traction engineers has led the College to arrange a five months' course for the special training of such engineers. Extreme care has been taken to offer only such work as will prove valuable to the man running the traction engine and other machinery. A relatively large amount of shop work and engine practice is introduced.

For the work in engine practice several of the most modern types of both steam and gas traction engines are available. Enough time is devoted to this part of the work to make each student thoroughly familiar with all of the engines, and able to operate them satisfactorily in actual practice. The engine practice work generally starts as soon as the frost is out of the ground, or about April 10th, and continues to the end of the term.

A series of lectures on the gas engine, with particular reference to its application to the tractor and the automobile, is given.

A proper proportion of recitations in closely allied subjects is also included in this course.

The tuition is eight dollars for the entire course with a small amount extra for laboratory fees.



Upon the satisfactory completion of the work the student is given a certificate which is virtually the same as a license to run an engine in this state.

Students who desire to take this course are expected to pass a satisfactory examination in arithmetic, to read intelligently and to show such general elementary training as will indicate that they are able to understand the subjects embraced in this course.

The work offered is as follows:

	periods per week
Arithmetic .....	5
Heat Engines and Elementary Physics .....	5
Stock Judging .....	2½
Steam and Gas Engine Lectures .....	2½
Forging .....	2½
Mechanical Drawing .....	2½
Steam and Gas Engine Practice .....	2

# Agricultural Experiment Station

## Station Staff

T. W. Dwight	Member Regents' Committee for the College
J. W. Campbell	Member Regents' Committee for the College
Ellwood C. Perisho	President of the College
James W. Wilson	Director and Animal Husbandman
Niels E. Hansen	Vice Director and Horticulturist
James H. Shepard	Chemist
Christian Larsen	Dairy Husbandman
Albert N. Hume	Agronomist and Superintendent of Sub-Stations
Joseph Gladden Hutton	Associate Agronomist
Manley Champlin	Assistant Agronomist and Collaborator with U. S. Department of Agriculture.
Howard Loomis	Agronomy Analyst
Guy E. Youngberg	Assistant Chemist
Matthew Fowlds	Assistant in Crops
H. W. Gregory	Assistant Dairy Husbandman
Edwin H. Hungerford	Dairy Analyst
Vern R. Jones	Assistant Dairy Husbandman and Dairy Bacteriologist
Harry Rilling	Assistant Agronomist
Arthur Lynch	Assistant Dairy Husbandman
R. C. Sherwood	Assistant Chemist
Fred C. Stoltenberg	Assistant Horticulturist
R. A. Larson	Secretary
E. I. Fjeld	Bulletin Clerk and Stenographer

## Agricultural Experiment Station

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Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state now receives annually \$30,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely; agronomy, animal husbandry, dairy, horticulture and chemistry.

Each of these divisions is in charge of an expert who is also professor of the same subject in the College.

About sixty acres of the college farm are set aside for experiments in crop rotation and testing varieties of grains.

Another tract of sixty acres is utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the state with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to residents of the state. Inquiries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 22,000 names.

All communications to this department should be addressed to the Director.

# Agricultural Extension Division

## Extension Staff

Elwood C. Perisho, .....	President
Gordon W. Randlett .....	Director
H. H. Stoner .....	Supt. of Short Courses
W. M. Mair .....	Supt. Boys' & Girls' Clubs
Guy E. Morrison .....	Specialist in Live Stock
Ward A. Ostrander .....	Farm Management Demonstrator
T. A. Meehan .....	Specialist in Dairying
Frank E. McCall .....	Specialist in Horticulture
Ralph L. Patty.....	Specialist in Agri. Engineering
Sam L. Sloan .....	Agent, Day County
A. W. Palm .....	Agent, Codington County
W. E. Lyman .....	Agent, Lawrence County
Dick Lewellen.....	Agent, Lyman County
E. W. Hall .....	Agent, Spink County
O. P. Drake .....	Agent, Beadle County
E. C. Bird .....	Agent, Douglas County
L. V. Ausman .....	Agent, Clark County
W. W. Underwood .....	Agent, Hughes County
Vey J. Valentine .....	Agent, Stanley County
A. R. Wije .....	Agent, Kingsbury County

## THE EXTENSION DIVISION

In 1914 Congress passed the Smith-Lever Act, appropriating a considerable sum of money to the various states in which Agricultural Extension work including Home Economics should be established. The state of South Dakota in its last Legislative Session met the requirements of the Federal Act by appropriating \$55,000 for the present biennial period to be used in Agricultural Extension including county agent work. Activities are carried on under the project plan as follows:

1. County Agent Project.
2. Short Course Project.
3. Boy and Girl Club Project.
4. Dairy Project.
5. Farm Management Project.
6. Live Stock Project.
7. Horticulture Project.

On July 1, 1916 or soon thereafter projects will be added in Home Economics, Agronomy and Animal Disease Control.

Any county in the state may secure the benefits of Federal and State appropriations in the following manner: It shall be lawful for 50 or more free holders residing in at least one-

rd of the congressional townships of the county, to organize and incorporate an Agricultural Extension Association. The members of the association shall pay a membership fee of \$2.00 and shall file articles of incorporation with the Secretary of State, and elect a board of directors. The directors may secure an appropriation from the County Board of Commissioners which may be deposited with the Treasurer of State and be augmented from state funds to 60 per cent of the amount so deposited. The county is then in a position to ask for Federal assistance.

The state law provides for the conducting of demonstration courses in Agriculture and Home Economics in all counties not employing a county agent. This work is under the immediate supervision of the Short Course Superintendent and is conducted during the late fall and winter months. It takes the place of Farmers' institutes of former years.

Boy and Girl Club Work is carried on usually in co-operation with the County Superintendent of Schools. This work is in charge of a State Club Leader. It consists in the organization of boys and girls between the ages of 10 and 18 years into clubs for the purpose of, corn growing, economical pig raising, garden- and canning, bread and garment making and so forth.

Workers in other projects are detailed to the various communities where their special services may be needed. With the exception of the County Agents all other extension workers are employed and their work administered directly by the State College.



# College Alumni

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## ALUMNI ASSOCIATION

H. C. Solberg, '91	.....	President
Roy K. Elliott, '05	.....	First Vice-President
Harry Gardner, '15	.....	Second Vice-President
Mary Boyd Labbitt, '01	.....	Third Vice-President
H. B. Mathews, '92	.....	Secretary and Treasurer

### Class of 1886

## BACHELOR OF SCIENCE.

Sayler, Marcus A.	.....	Fruit Grower, Orland, Cal.
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### Class of 1888.

## BACHELOR OF SCIENCE.

Aldrich, John M.	.....	
With U. S. Bureau of Entomology, 316 S. Grant St., West	.....	Lafayette, Ind.
Lawrence, Philip A.	.....	Attorney, Fargo, N. D.
Wellman, Lulah (Hewes)	.....	Lakewood, N. Y.

### Class of 1889.

## BACHELOR OF SCIENCE.

Boswell, Katie (Arnold)	.....	Kennebec
Cranston, Mary (Crane)	.....04303	Lincoln St., Spokane, Wash.
Cross, Alvah G.	.....	
Eno, Durell G.	.....	Merchant, Platte
Grady, Francis A.	.....	Attorney, Crookston, Minn.
Haber, Sarah (Cunningham)	....1015	Grand Blvd., Spokane, Wash.
Korstad, Hans	.....	Rural Mail Carrier, Brookings
Larson, Lars K.	.....	Bank Cashier, Dell Rapids
Lawshe, Grace (Brooke)	.....	
.....	.....	Cashier Dept. Store, 1649 Ashland Ave., St. Paul, Minn.
McKenney, Duston W.	.....	
Supervisor Manual Training, 302 Lewis Ave., Billings, Mont.	.....	
McLouth, Lewis C., Gen. Mgr. Miniature Sales Co.	.....	
.....	.....1228	Chamber Com., Detroit, Mich.
Mork, Albert A.	.....	Farmer, Grelland, N. D.
Roe, Ellen (Aldrich)	.....	Died Dec. 8th, 1897, at Helena, Mont.
Rogers, Edmund	....	Machinist, 104 Eleventh St., Milwaukee, Wis.
Ross, Carrie (Orcutt)	.....518	W. Third St., Northfield, Minn.

Ross, Abbie (Wesche) ..... Webb, Ia.  
 Wardall, Anna (Scott) .....  
 .....Osteopath, 3201 Forty-first Ave., S. W., Seattle, Wash.

### Class of 1890.

### BACHELOR OF SCIENCE.

Allen, William C. ....Died in Chicago  
 Day, John M. ....Farmer, Ekalaka, Mont.  
 Duffey, Maggie (Irish) .....4206 Castleman Ave., St. Louis, Mo.  
 Egeburg, Hildus .....Farmer, Brookings  
 Haasarud, Ole H. ....Farmer, Bratsburg, Minn.  
 Harkins, Lilla A., Prof. of Dom. Science, 613 S. Grand Ave....  
 .....Montana Agricultural College, Bozeman  
 Hopkins, Cyril G., Prof. of Agronomy, Chemist and Vice Director  
 of Experiment Sta., U. of Illinois, 1001 S. Wright St., Champaign  
 Jenkins, John C. ....Attorney, 815 Spalding Bldg., Portland, Ore.  
 Kenyon, Arthur H. ....Lawyer, 1315 Mallon Ave., Spokane, Wash.  
 Pyne, Estel W. ....Capitalist, 633 S. Union Ave., Los Angeles, Cal.  
 Roe, Guy W., State Mgr. Union Fibre Co. ....  
 .....2015 7th Ave., Seattle, Wash.  
 Stoner, Minna A., Prof. of Home Economics .....  
 .....N. D. Agricultural College, Fargo, N. D.  
 Wardall, Norman M. ....2215 41st Ave., S. W., Seattle, Wash.

### Class of 1891.

### MASTER OF SCIENCE.

Aldrich John M., With U. S. Bureau of Entomology .....  
 .....Lafayette, Ind., 316 S. Grant St., West Lafayette, Ind.

### BACHELOR OF SCIENCE.

Aldrich, Irwin D., Editor and Sec. State Board of Regents, Big Stone  
 Bell, William D., .....  
 .....Mgr. Am. Motorists Ass'n, Upham Bldg., St. Paul, Minn.  
 Bentley, Wm. S .....Physician, Rapid City  
 Chamberlain, Jennie (Spooner) .....  
 .....Physician, 813 4th Ave., Detroit, Mich.  
 Crane, Austin B., Prof. of Math. and Civil Eng., Spokane Univ.  
 .....04303 Lincoln St., Spokane  
 Davis Homer .....Physician, Genoa, Neb.  
 Dillon, Willis C. ....  
 Doughty, Hettie (Dibble) .....Beresford  
 Frick, Mary (Magaw) .....903 W. Zumbro St., Rochester, Minn.  
 Hann, Jay B. ....Photographer, Bellingham, Wash.  
 Houston, Grant .....Physician, 201 W. Chicago St., Joliet, Ill.  
 Irish, Henry C., Horticulturist, 4206 Castleman Ave., St. Louis, Mo.  
 Lewis, Perry .....Inventor, 101 E. Cherry St., Mankato, Minn.  
 Robinson, Alice (Haberlein), 1710 Arlington Ave., Los Angeles, Cal.

Shannon, Fanny (Fourt) ..... Fairfield, Iowa  
 Solberg, Halvor C. .... Prof. Steam and Mechanical Eng., S. D. S.  
 Updyke, Nora (Bacon) ..... 2211 Elizabeth St., Pueblo, Colo.  
 Valleau, Vinal B. .... Moving Picture Theaters, Albert Lea, Minn.  
 West, Hugh H. .... Physician, Spurling Bldg., Elgin, Ill.  
 Wolgemuth, Lee E. .... Real Estate, Hamilton, Mo.

### Class of 1892.

### BACHELOR OF SCIENCE.

Austin, Steven E., Mechanical Engineer ..... Chicago  
 Davis, Samuel H. .... Farmer, Beaverton, O.  
 Griffiths, David, Asst. Agrostologist .....  
 ..... Dept. of Agriculture, Tacoma Park, Washington, D.  
 Hamlin, John R., Jr. .... Merchant, Hawthorne, Cal.  
 Harding, Albert S., Prof. of History & Political Science, S. D. S.  
 Hatfield, Ira A. .... Died Feb. 8th, 1914, at Lincoln, Neb.  
 Keeney, Emma (Ferris) ..... Springfield, Ill.  
 McAndrew, James E. .... Lawyer, 808 Realty Bldg., Spokane, Wash.  
 McLouth, Ida B. .... Died Aug. 27, 1899, at Short Beach, Cal.  
 Madden, Marguerite (Akin) ..... Brookline, Mass.  
 Mathews, Hubert B. .... Prof. of Physics, S. D. S.  
 Plocker, Eva (Mathews) ..... Brookline, Mass.  
 Schlosser, Thomas F. .... Clergyman, Carleton, Ont.  
 Sloan, Nettie (Torrence) ..... Redlands, Cal.  
 Snell, Effie (Clark), 400 E. 14th St., University Place, Lincoln, Neb.  
 Whitten, John C. .... Prof. of Hort., U. of Missouri, Columbia, Mo.  
 Winegar, Albert J. .... Life Insurance, Box 425, Beloit, Wis.

### Class of 1893.

### MASTER OF SCIENCE.

Griffiths, David, Asst. Agrostologist .....  
 ..... Dept. of Agriculture, Tacoma Park, Washington, D.

### BACHELOR OF SCIENCE.

Bates, Edmund T. .... Farmer, Wyoming,  
 Beck, Milton ..... Engineer, Lansing, Mich.  
 Edgerton, Wm. M. .... Physician, Faulton, N. Y.  
 McLouth, Benjamin F., Ins. Agent .....  
 ..... L. A. Investment Bldg., Los Angeles, Cal.  
 Robertson, Ada N. .... Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec.  
 ..... for China, 120 Szechuen Road, Shanghai, China.  
 Schoppe, W. J. A. .... Farmer, Galesburg, Mo.

## Class of 1894.

## MASTER OF SCIENCE.

Plocker, Eva (Mathews) .....Brookings  
 Wolgemuth, Lee E. ....Real Estate, Hamilton, Mont.

## BACHELOR OF SCIENCE.

Brown, Cyrus O. ....Attorney, Douglas, Wyo.  
 Brown, James A. ....Attorney, 607 Sec. Mut. Bldg., Lincoln, Neb.  
 Dibble, Hattie (Stow).....Grandview, Mont.  
 Hopkins, Mrs. C. G.....1001 S. Wright St., Champaign, Ill.  
 Luke, Fred K. ....Farmer, R. F. D. No. 2, Kalispell, Mont.  
 Parker, Fannie (Spooner).....Brookings  
 Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.  
 Tanzy, Marvin F. ....Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D. ....Real Estate, Greenfield, Ind.  
 Williams, Elinor (Knox) .....Saccaton, Arizona  
 Young, Gilbert A., Prof. of Mech. Eng., Purdue Univ. ....  
 .....739 Owen St., Lafayette, Ind.

## Class of 1895.

## MASTER OF SCIENCE.

McKenney, Duston W., Supervisor Manual Training.....  
 .....302 Lewis Ave., Billings, Mont.  
 Schoppe, W. J. A. ....Farmer, Groton  
 Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.

## Class of 1900.

## BACHELOR OF SCIENCE.

Allen, Hart M. ....Druggist, Woodland, Cal.  
 Anderson, Clark W. ....Died March 6th, 1902, at Brookings  
 Beebe, Jay L. ....Physician and Surgeon, Anaheim, Cal.  
 Carlson, Esther (Lilygreen).....701 Magnolia St., St. Paul, Minn.  
 Carlson, Ella (Howard).....Lake Preston  
 Davies, Sara (Sherwin).....70 N. Y. Ave., Brooklyn, N. Y.  
 Davies, Mary (Hutchins).....Falls City, Neb.  
 DeLa, John W. ....Editor, Lidgerwood, N. D.  
 Doughty, Matthew W., Civil Engineer with Delaware & Lacka-  
 .....wana Ry., Hoboken, N. J.  
 Grove, Frank W. ....Dentist, Delta, Colo.  
 Harza, Carl.....Electrician, 21 Scovel Place, Detroit, Mich.  
 Kendall, Clinton D. ....Druggist, Brookings  
 Lawrence, Jessie (Hagerman).....R. 1, Auburn, Wash.  
 Mathews, Alice (Albright).....714 20th St. N., Great Falls, Mont.  
 Mathews, Roscoe A., Lumberman, 1323 6th Ave. N. ....  
 .....Great Falls, Mont.  
 Morrison, Freda (Cole).....Wenatchee, Wash.

Olson, Gustava (Hodgeson).....Linden, Md.  
 Williams, Callie (Olson).....116 N. Summit Ave., Sioux Falls

### PHARMACY GRADUATES.

Bentley, Wm. S. ....Physician and Surgeon, Rapid City  
 Brosseau, Jessie E. ....Physician and Surgeon, Frankfort  
 Baldwin, Corwin B. ....Druggist, Rapid City  
 Connell, John C. ....Druggist, Luverne, Minn.  
 Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Eckhart, Henry.....Died at Menmo, S. D.  
 George, William.....Physician and Surgeon, Selby  
 Hart, Bertrand.....Physician and Surgeon, Blunt  
 Jones, Robert.....Druggist, Madison  
 West, Hugh H. ...Physician and Surgeon, Spurling Bldg., Elgin, Ill.

### Class of 1901.

### MASTER OF SCIENCE.

Knox, Wm. H. ....With U. S. Dept. of Agr., Saccaton, Arizona  
 Whitehead, Bower T. ....Prof. Pharmacy, S. D. S. C.

### BACHELOR OF SCIENCE.

Bagley, Sussana..Teacher, 3012 Ezekiel St., Lake Co., Zion City, Ill.  
 Bolles, Laura Jane.....Brookings  
 Brosseau, Jesse E. ....Physician, Frankfort  
 Boyd, Mary (Labbutt).....Riverside Park, Sioux City, Ia.  
 Cranston, Margaret (Young)..Died June 7th, 1907, at Oakes, N. D.  
 Culhane, Michael E. ....Culhane Adjustment Co., Brookings  
 Davies, Autumn .....Instructor in History, H. S., Omaha, Neb.  
 Dodge, Fred E. ....Hotel Mgr., Redfield  
 Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Enos, Winifred (Kendall).....Brookings  
 Erickson, Martin L. ....Forestry Service, Medford, Ore.  
 Evans, Lina (Roskie).....Custer  
 Fishback, Myra (Kennedy).....86 College St., Calcutta, India  
 Harza, LeRoy F. ....Civil Eng., Spalding Bldg., Portland, Ore.  
 Hatton, John H. ....Forestry Service, Forestry Bldg., Denver, Colo.  
 Johnson, Rhoda (Lee) .....Died Oct. 18, 1909, Denver, Colo.  
 Kendall, Leonard J. ....Telegraph Operator, Brookings  
 Kennedy, C. Leroy.....  
 .....Fruit Fraiser, R. F. D. No. 18, Mountain View, Cal.  
 Langdon, Lillian (Culhane).....Brookings  
 McElmurry, Loretta, Instructor Domestic Science, State Normal,  
 .....Madison, S. D.  
 Mork, Theodore.....Farmer, Des Laes, N. D.  
 Phillips, Florence (Haas).....Arlington  
 Phillips, C. Louise....Librarian, U. S. Dept. Agr., Washington, D. C.



**PHARMACY GRADUATES.**

Cornell, Edward, Pharmacist.....  
 .....1824 Lyndale Ave., S., Minneapolis, Minn.  
 Tidball, Clyde.....Druggist, Brookings

**Class of 1902.****BACHELOR OF SCIENCE.**

Fleming, Michael .....With M. A. Hanna Coal Co., St. Paul, Minn.  
 George, William A. ....Physician and Surgeon, Selby  
 Hart, Bertrand M. ....Physician and Surgeon, Blunt  
 Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie  
 Johnson, Clara (Johnson).....Brookings  
 Johnson, Edward.....Died May 1, 1907, Tacoma, Wash.  
 Kephart, George.....Lawyer, Iowa Building, Sioux City, Ia.  
 Lee, Berton E. ....Accountant, 104 S. 4th St., Mankato, Minn.  
 Ramsey, Henry J., Expert in Fruit Storage, Bureau Plant in-  
 dustry.....Washington, D. C.  
 Roskie, Geo. ....Forester, Custer  
 Thornber, Edith (Cuckow) .....La Junta, Colo.  
 Trooien, Ole N. ....Died at Brookings, Dec. 21, 1915  
 Winegar, Laura .....Nurse, Brookings

**PHARMACY GRADUATES.**

Allison, Wm. F., Prof. of Civil Eng., U. of Washington.....  
 .....Seattle, Wash.  
 Boyden, Frank E. ....Physician and Surgeon, Pendleton, Ore.  
 Christianson, Bernett.....Druggist, Volga  
 Hayter, McPherson.....Druggist, Artesian  
 Jarratt, Arthur A. ....Druggist, Colman  
 Jarvis, S. Hall.....Druggist, Faulkton  
 Leighty, James A. ....Druggist, Winifred  
 Morton, Frederic M. ....Druggist, Lake City  
 Pickles, Chester E. ....Farmer, Elrod  
 Schnaidt, Henry, Druggist and Member State Board of Pharmacy,  
 .....Parkston  
 Schroeder, Anna (Gassman) .....Howard  
 Thomas, John C. ....Druggist, Marion

**Class of 1903.****MASTER OF SCIENCE.**

Crane, Austin B., Prof. of Math. and Civ. Eng., Spokane Univ.,  
 .....Spokane, Wash.  
 Hoy, Howard H. ..Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.

**BACHELOR OF SCIENCE.**

Almond, Fred C. ....Died March 12th, 1909, at Clear Lake  
 Cole, John S., Examiner of Dry Land Agr. Exp. Stations, Dept.  
 of Agr. ....989 So. Penn. Ave., Denver, Colo

Colegrove, Lettie (Drew).....Farmington, Minn.  
 Cuckow, Fred W. ....Lawyer, La Junta, Colo.  
 Hubbart, Minnie (Holbein).....Minot, N. D.  
 Johnson, Isaac.....Lumberman, Brookings  
 Kendall, Krete (Miller).....Brookings  
 Langdon, Alice.....Stenographer, Brookings  
 Miller, Shirley P. ....Professor Zoology, S. D. S. C.  
 Norton, Frank A. ....Fruit Grower, Grand View, Wash.  
 Otterness, Jens M., Private Secretary to Senator Sterling.....  
 .....441 Senate Office Bldg., Washington, D. C.  
 Peirce, E. Esther.....Teacher, 524 E. Kemp St., Watertown  
 Sanborn, Ethel I., Instructor Univ. of Oregon.....  
 .....670 12th Ave., E., Eugene, Ore.  
 Sarvis, Roscoe J., Elec. Eng., 1319 7th St., S. E., Minneapolis, Minn.  
 Seide, Louise (Prell).....Calamus, Iowa  
 Webster, James L. ....Farmer, Wenatchee, Wash.  
 Westcott, Geo. R., Asst. Engr., Mo. Pac. Ry.....  
 .....5764 Goodfellow Ave., St. Louis, Mo.

### PHARMACY GRADUATES.

Drew, Arthur W. ....Physician and Surgeon, Farmington, Minn.  
 Hall, Roy J. ....Druggist, Oldham  
 Heston, Edward C. ....Physician and Surgeon, Roslyn, Wash.  
 Hollister, Arthur R. ....Traveling Salesman, Madison  
 Howell, John E., Chemist, S. P. R. R. ....  
 .....402 Hathaway Ave., Houston, Texas  
 Johnston, Samuel.....Druggist, Hazel  
 Norton, Frank A. ....Fruit Grower, Grand View, Wash.  
 Steiner, Frederick W., Physician.....  
 .....323 Union Ave., Havre de Grace, Md.

### BACHELOR OF SCIENCE.

Allison, Wm. F., Prof. of Civil Eng., U. of Wash., Seattle, Wash.  
 Brown, Sarah.....Shannon City, Iowa  
 Cornell, Harry M. ....Real Estate 1 Stratford, Fargo, N. D.  
 Mayland, Mable (Merrick).....Troy, Kan.  
 Parker, Anna (Moore).....Brookings  
 Salisbury, Edith (Robertson).....120 Szechuen Road, China  
 Sevy, Isaac B. ....Teacher, Freewater, Oregon  
 Sproul, Wm. T., Gen. Mgr., Ingersoll Milling Machine Co. ....  
 .....Rockford, Ill.  
 Thornber, John J. ....Prof. of Botany, U. of Arizona, Tucson  
 Wilcox, Ernest N. ....Farmer, Thawville, Ill.

### PHARMACY GRADUATES.

Briggs, Elmer E. ....Farmer, Muscoda, Wis.  
 Knox, Wm. H. ....With U. S. Dept. of Agr., Saccaton, Arizona

Lentz, Elmer A. ....Dentist, Brookings  
 Murphy, Wm. ....Died July 5, 1896, at Brookings  
 Whitehead, B. T. ....Prof. Pharmacy, S. D. S. C.

#### Class of 1896.

#### MASTER OF SCIENCE.

Brown, James A. ....Attorney, 607 Sec. Mut. Bldg., Lincoln, Neb.  
 Luke, Fred K. ....Farmer, R. F. D. No. 2, Kalispel, Mont.  
 Robertson, Ada N. ....Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Snell, Effie (Clark), 400 E. 14th St., University Place, Lincoln, Neb.  
 Wilcox, Ernest N. ....Farmer, Thawville, Ill.

#### BACHELOR OF SCIENCE.

Atkinson, Jesse C. ....Farmer, Allegan, Mich.  
 Carter, Louis W. ....Register of Deeds, Highmore  
 Dibble, Ida (Brown) ....607 Sec. Mut. Bldg., Lincoln, Neb.  
 Downing, Jennie C. ....Tel. Mgr., Rathdrum, Idaho  
 Grattan, Paul H. ....Traveling Salesman, St. Paul, Minn.  
 Hegeman, Harry A., Captain, 19th Infantry, U. S. A. ....  
 .....Vancouver Barracks, Ore.  
 Holm, Andrew B. ....Accountant, Brookings  
 Hoy, Howard H. ..Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.  
 Korstad, Mary .....Brookings  
 Lusk, Willard C. ....Editor Yankton Press and Dakotan, Yankton  
 Mathews, Alta (Smith).....Pepperwood, Cal.  
 Mathews, Nora (Hoy).....Brookings  
 Sasse, Ernest G. ....Physician, Lidgerwood, N. D.  
 Williamson, Albert.....Attorney, Kennebec

#### PHARMACY GRADUATES.

Cotter, J. C. ....Merchant, Dell Rapids  
 Grove, Eugene.....Physician, Hetland, S. D.  
 Moore, Thomas.....Druggist, Waterloo, Ia.  
 Palmer, Horton.....Druggist, 426 S. Sycamore St., Santa Ana, Cal.  
 Sherwin, Frank.....Merchant, Willamina, Ore.

#### Class of 1897.

#### MASTER OF SCIENCE.

Davis, Homer .....Physician, Genoa, Neb.

#### BACHELOR OF SCIENCE.

Ainsworth, Cephas B. ....Land, 406 Idaho St., Lewiston, Mont.  
 Atkinson, George....Map Publisher, Ceylon, Saskatchewan, Canada  
 Atkinson, Walter., Civil Engineering, 632 W. 67th St., Chicago, Ill.  
 Boyden, Frank E. ....Physician and Surgeon, Pendleton, Ore.  
 Clevenger, John W. ....Dentist, Chamberlain

Hargis, Christie (Saylor).....1019 6th Ave., E. Des Moines, Iowa  
 Hazle, Wm. A. ....Lawyer, 208 6th Ave., S. E., Aberdeen  
 Husted, Harley H. ....Died Jan. 14th, 1907, at Lincoln, Neb.  
 Jolley, Wm. G.....Supt. of Schools, Battle Ground, Mont.  
 Madden, Cassie (Crowley), Stenog. 625 9th St. S., Minneapolis, Minn.  
 Olson, Eva.....Teacher, 221 4th Ave., N., South St. Paul, Minn.  
 Parsons, Thos. S. ....Prof. of Agro., U. of Wyo., Laramie, Wyo.  
 Roe, Robert .....Stockman, Highmore  
 Shuster, John W., Asso. Prof. Elec. Eng., U. of Wisconsin, Madison  
 Thornber, Walter S., Director Extension Work, Washington  
 State College .....Pullman  
 Walters, Wm. H. ....Grain Buyer, Bruce  
 West, Orpha (Sevy) .....Freewater, Ore.  
 Whaley, Neva (Harding) .....Brookings  
 Whitehead, Bower T. ....Prof. of Pharmacy, S. D. S. C.  
 Wilcox, Alice (Remsburg) .....Thawville, Ill.  
 Work, Lloyd E. ....Bond Salesman, 10 S. La Salle St., Chicago, Ill.  
 Young, Grace (Bullen) .....260 Jessup St., Portland, Ore.

### Class of 1898.

### MASTER OF SCIENCE.

Chileott, E. C., Agronomist in charge of Dry Land Agriculture,  
 .....Washington, D. C.  
 Harkins, Lilla A., Prof. Domestic Science.....  
 .....Montana Agri. College, Bozeman, Mont.  
 Parsons, Thos. S. ....Prof. of Agro., U. of Wyo., Laramie

### BACHELOR OF SCIENCE.

Ainsworth, Howard, Fruit Grower.....  
 .....R. F. D. No. 17, Mountain View, Cal.  
 Ainsworth, Flora (Hazle).....208 6th Ave., S. E., Aberdeen  
 Barton, Alice (White) .....2548 C. St., Santa Ana, Cal.  
 Beck, Louis.....Engineer "Ana Dean Farm," Barberton, O.  
 Bolles, Myrick N. ....Farmer, Brookings  
 Curtiss, Elsie (Crane) .....Kettle Falls, Wash.  
 Davidson, Margaret (Crane)..1818 E. Liberty Ave., Spokane, Wash.  
 Fjerestad, Hans C. ....Merchant, 655 S. Main Ave., Sioux Falls  
 Harding, Charles J. ....Teacher, Mankato, Minn.  
 Hegeman, Maude (Boyden) .....Pendleton, Ore.  
 Hegeman, Mabel (Allison) .....Univ. of Wash., Seattle, Wash.  
 Hodgeson, Herbert H., Top. Eng., U. S. Geol. Survey, Wash., D. C.  
 Knox, Wm. H. ....With U. S. Dept. of Agr., Saccaton, Arizona  
 Lawrence, Claude W. ....Farmer, Sequim, Wash.  
 Lawrence, Clay .....Lawyer, Pioneer Bldg., Seattle, Wash.  
 Loveland, Addie (Towne)....2104 Penn. Ave. S., Minneapolis, Minn.  
 Paddock, Jay M. ....Traveling Salesman, Eugene, Ore.  
 Riemann, Edith (Adams) .....Oak Park, Ill.

Thornber, Wm. T. .... Farmer, Colman  
 Towne, Judson, Teacher Physics, E. Side H. S. ....  
 .....2104 Penn. Ave. S., Minneapolis, Minn.

### PHARMACY GRADUATES.

Beebe, Jay L. .... Physician and Surgeon, Anaheim, Cal.  
 Clevenger, J. W. .... Dentist, Chamberlain  
 Holsey, Joseph ..... Druggist, Veblen  
 Lee, Berton E. .... Accountant, 104 S. 4th St., Mankato, Minn.

### Class of 1899.

### MASTER OF SCIENCE.

Dibble, Hattie (Stow) .... Grandview, Wn.  
 Mathews, Hubert B. .... Prof. of Physics, S. D. S. C.  
 Thornber, Walter S., Director Extension Work, Washington  
 ..... State College, Pullman  
 Whitten, John C. .... Prof. of Hort., U. of Missouri, Columbia

### BACHELOR OF SCIENCE.

Colegrove, Ina (Nelson) .... 148 West St., Worcester, Mass.  
 Findeis, Phillip ..... Lumber Merchant, Miranda  
 Lawrence, Mary M., P. G. Student Columbia University, 519 W.  
 ..... 120 St., New York, N. Y.  
 Lawrence, Wm. H., Prof. of Horticulture, University of Missouri,  
 ..... Columbia  
 Mason, Nellie (Mason) ..... Albion, Iowa  
 Nachtigal, Isaac ..... Farmer, South Shore  
 Sherwin, Howard H., Civil Engineer, 70 N. Y. Ave., Brooklyn, N. Y.  
 Walter, Edith (Fystrom) .... Died May 16, 1910, at Geneseo, N. D.  
 West, George ..... Physician, Armstrong, Iowa

### PHARMACY GRADUATES.

Carr, George ..... Druggist, Bison  
 Crowley, D. C. .... Druggist, Portland, Ore.  
 Hepner, Frank ..... Asst. Chemist U. of Wyoming, Laramie  
 Kendall, Clinton D. .... Druggist, Brookings  
 Lindsey, Charles ..... Farmer, Winifred  
 Oulton, Frank ..... Real Estate, Faulkton  
 Shriver, E. M. .... Real Estate, Coos Bay, North Bend, Ore.  
 Taylor, C. DeWitt .....  
 Trumm, Robert E. .... Druggist, Hayti  
 Van Dusen, Fred J. .... Lead  
 Williams, Percy, Physician and Surgeon .....  
 ..... 557 Spring St., Los Angeles, Cal.  
 Young, Alfred J. .... Farmer, Adanac, Saskatchewan



## Class of 1904.

## MASTER OF SCIENCE.

Trooien, Ole N. ....Died in Brookings, Dec. 21, 1915

## BACHELOR OF SCIENCE.

Binford, Wm. W. ....Lumberman, Greenleaf, Idaho  
 Bushnell, Maude (Kelton).....Poynette, Wis.  
 Loucks, Anna Y. (Brown).....Brookings  
 Mattice, Albert F. ....Oculist, 1017 Cobb Bldg., Seattle, Wash.  
 McGarry, Lawrence R. ....Merchant, Mansfield  
 Ruth, Thomas H. ....Veterinary Surgeon, De Smet  
 Sanderson, Everett G. ....Farmer, Aurora  
 Sherwin, Ralph L. ....Civil Engineer, Bay Harbor, Fla.  
 Smith, Wm. H. ....Missionary, Damaguete, P. I.  
 Thompson, Clarence.....Farmer, Dell Rapids  
 Walter, L. Erving.....Farmer, Conde

## PHARMACY GRADUATES.

Anderson, Ernest.....Druggist, South Shore  
 Dillon, Cornelius.....Druggist, Hotel Smede Bldg., Eugene, Ore.  
 Frick, Harry E. ....Merchant, Mitchell  
 Goodale, Alton R. ....Druggist, Angeles Pharm., Los Angeles, Cal.  
 Hooker, Henry.....Physician, Danville, Ill.  
 Koch, Arthur E. ....Attorney, 621 Ford Bldg., Detroit, Mich.  
 Ramsdell, Leonard C. ....Real Estate, Box 399, Miami, Fla.  
 Thompson, Gottfrey.....Physician and Surgeon, Sioux Falls  
 Weisflock, Theodore.....Druggist, Frankfort

## Class of 1905.

## MASTER OF SCIENCE.

Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie  
 Norton, Frank A. ....Fruit Grower, Grand View, Wash.  
 Phillips, C. Louise, Librarian, Bureau of Plant Industry, Grain  
     Standardization .....Washington, D. C.  
 Thompson, Clarence.....Farmer, Dell Rapids  
 Walter, L. Erving.....Farmer, Conde

## BACHELOR OF SCIENCE.

Boyden, Guy L. ....Physician and Surgeon, Pendleton, Ore.  
 Chappell, Bessie.....Teacher, Lamar, Colo.  
 Chappell, Elsie (Wilson).....Brookings  
 Davis, Clifford W. ....Farmer, 2337 Grant St., Berkeley, Cal.  
 Elliott, Roy K. ....Electrician, 20 Bay State Ave., Somerville, Mass.  
 Fassett, Della (Loucks).....Watertown  
 Fishback, Van Dusen.....Asst. Bank Cashier, Brookings

Forest, Victor E., Contractor, 224 Boston Blk., Minneapolis, Minn.  
 Fulkerson, Vincent.....Special Agent, Dept. of Agr., Fallon, Nev.  
 Grove, Mary (Potter).....Univ. of Tenn., Nashville  
 Hage, Christian F. ....Druggist, Toronto  
 Howg, Edwin M. ....Physician and Surgeon, New Effington  
 Jensen, Lewis N., Special Agent U. S. Dept. Agr., Amarillo, Texas  
 Johnson, Carl L., Electrician, 805 Lincoln Ave., Schneetady, N. Y.  
 Mathews, Harry E. ....Railway Service, Las Vegas, Nevada  
 Miller, Ralph L. ....Lumberman, Melville, N. D.  
 Murphy, Matt W. ....Lawyer, 408 8th Ave. S., Fargo, N. D.  
 Nelson, John Harland, Prof. Structural Eng., Polytechnic Institute, 148 West St. ....Worcester, Mass.  
 Ronning, Oscar E. ....Rural Mail Carrier, Hayti  
 Schaphorst, Wm. F., Technical Advertising, Woolworth Bldg.,  
 .....New York City  
 Seeger, Adolph M. ....Elec. Eng., Light & Power Co., Toledo, O.  
 Slocum, Ina S. (Deeley).....2818 Granville St. S., Vancouver, B. C.  
 Thogerson, Arthur A. ....Contractor, 437 C. of C., Portland, Ore.  
 Walters, Daisy.....Teacher, Bruce  
 Williams, Harry, Real estate.....  
 .....L. A. Investment Bldg., Los Angeles, Cal.  
 Williams, Percy, Physician and Surgeon.....  
 .....557 S. Spring St., Los Angeles, Cal.

### PHARMACY GRADUATES.

Fjerestad, Carl.....Druggist, Elkton  
 Howg, Edwin M. ....Physician and Surgeon, New Effington  
 Larson, Lars P. ....Teacher, R. 5, Howard  
 Mathews, Harry E. ....Railway Service, Las Vegas, Nev.  
 McCurdy, Walter.....Banker, Lane  
 Morton, Grant J., Federal Drug Ins. ....  
 .....105 Custom House, Portland, Ore.  
 Pottinger, Geo. ....Druggist, Valley Springs  
 Thompson, Clarence.....Farmer, Dell Rapids  
 Volin, Porter.....Physician, Lennox

### Class of 1906.

### BACHELOR OF SCIENCE.

Aldrich, G. Malcolm, Prin. Calhoun Schools.....  
 .....R. F. D. No. 2, Hopkins, Minn.  
 Barrett, J. Wylie.....Electrical Engineer, Plankinton  
 Bonesteel, Bee (Dillman).....Newell  
 Brownell, Ellen (Wellington).....Calipatua, Cal.  
 Burghardt, Roy D. ....Electrician, 89 Marion St., Seattle, Wash.  
 Carpenter, Abbie J., Domestic Science Teacher.....  
 .....524½ Broadway, Seattle, Wash.  
 Chilcott, Ellery F. ....Supt. Ex. Station, Woodward, Okla.

Coller, Fred A., Physician and Surgeon.....	
.....	658 W. Jefferson St., Los Angeles, Cal.
Davies, Gladys (Grace).....	Akron, Colo.
Erstad, Alfred J., Electrician, Standard Mach. Co., Portland, Ore.	
Evans, Edna V., Prof. Home Economics, Buena Vista College,	
.....	321 Otsego St., Storm Lake, Ia.
Kennard, Frank L., Agronomy, N. W. Exp. Station, Crookston, Minn.	
Knox, Arthur H. ....	Farmer, Alpena
Koch, Arthur E. ....	Lawyer, 621 Ford Bldg., Detroit, Mich.
Moffatt, Margaret E. ....	Teacher, Bruce
Reich, Rose M. ....	Teacher, Tunnel City, Wis.
Thornber, Jessie B. ....	La Junta, Colo.
Youngberg, Guy E. ....	Asst. in Chem., S. D. S. C.

### PHARMACY GRADUATES.

Allison, Harold.....	Physician and Surgeon, Heppner, Ore.
Bergeim, Olaf, Asst. in Chem., Jefferson Med. College.....	
.....	10th and Walnut Sts., Philadelphia, Pa.
Davis, Gladys (Grace).....	Akron, Colo.
Harben, Bartlett L. ....	Died June 10, 1912, at Winner, S. D.
Holm, A. B. ....	Accountant, Brookings
Locke, Chas. ....	Pharmacist, Brookings
Wipf, Michael J. ....	Druggist, Alsen, N. D.

### Class of 1907.

### MASTER OF SCIENCE.

Culhane, Michael E. ....	Of Culhane Adjustment Co., Brookings
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### BACHELOR OF SCIENCE.

Binnewies, Mabel E. ....	Teacher, Brookings
Briggs, Stephen F., of Briggs & Stratton Co. ....	
.....	258 Milwaukee St., Milwaukee, Wis.
Burch, Walter S., Elec. Engr., with Rochester Railway and Light	
Co. ....	Box 653, Rochester, N. Y.
Christianson, Christine (Buck), 814 E. Rio Grande St., El Paso, Tex.	
Dillman, Arthur C. ....	Special Agent, Dept. of Agr., Newell
Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College....	
.....	706 N. 12th St., Corvallis, Ore.
Elliott, Bruce A. ....	Manual Training Teacher, Hibbing, Minn.
Elliott, Ross W. ....	Manual Training Teacher, Hibbing, Minn.
Fjerestad, Alman.....	Electrical Engineer, Estelline
Gagel, Gerald ....	Electrician, Rialto, Cal.
Hofstetter, Geo., Instructor Manual Training, Govt. School....	
.....	Box 487, Manila, P. I.
Kirk, John R. ....	Farmer, Springfield
Johnson, Aaron G., Plant Pathologist, U. of Wis. ....	
.....	1910 West Lawn Ave., Madison, Wis.

Knutson, Mabel (Troien).....	Teacher, Brookings
McCordie, Clare, Machine Expert, Moose Jaw, Saskatchewan, Canada	
McElmurry, Rilla (Eels)....	129 Wellendorf Ave., Youngstown, Ohio
Morton, Grant J., Fed. Drug. Ins. ....	
.....	105 Custom House, Portland, Ore.
Reich, J. Carl, Western Elec. Co. ....	
.....	4130 Washington Bvd., Garfield Sta., Chicago, Ill.
Salmon, Cecil, Agronomist Kansas Agr. College.....	
.....	1630 Leavenworth, Manhattan
Sanderson, Eugene, Electrician, 56 Woodward Ave., S. Norwalk, Conn.	
Tuttle, Volney J. General Electric Co., D. C. Eng Dept. ....	
.....	Schenectady, N. Y.
Underwood, Genevieve (Schmidt) .....	Bryant
Westcott, Ruth M. (Johnson) ..	1910 West Lawn Ave., Madison, Wis.
Work, Mary L. ....	Stenographer, 3850 Indiana Ave., Chicago

### PHARMACY GRADUATES.

Dexter, David F. ....	Druggist, Canton
Roney, Ray W. ....	Druggist, Chester
Ennis, Herbert I. ....	Druggist, Volga
Kartrude, Inga M. ....	Teacher, Hardwick, Minn.

### Class of 1908.

### MASTER OF SCIENCE.

Coller, Fred A., Physician and Surgeon .....	
.....	658 W. Jefferson St., Los Angeles, Cal.
Koch, Arthur E. ....	Lawyer, 621 Ford Bldg., Detroit, Mich.

### ELECTRICAL ENGINEER.

Elliott, Ross W. ....	Manual Training, Hibbing, Minn.
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### BACHELOR OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon .....	
.....	Mass. Gen. Hosp., Boston, Mass.
Bergeim, Olaf, Asst. in Chemistry, Jefferson Med. Co. ....	
.....	Philadelphia, Penn.
Carpenter, Clarence A., Electrical Engineer .....	
.....	With Bureau of Standards, 1133 6th St., Washington, D. C.
Chilecott, Ralph .....	Farmer, Vienna, Va.
Cooley, William R. ....	Stockman, Springfield
Griffith, T. Edwin .....	Farmer, Timmer, N. D.
Holsey, Ernest .....	Elec. Eng., Y. M. C. A. Bldg., Spokane, Wash.
Hubbart, Edith J. ....	Asst. Librarian, S. D. S. C.
Hyde, Hallie W. ....	Inst. Dom. Sc., U. of Idaho, Moscow
Kelly, Amy .....	Inst. Dom. Sc., U. of Idaho, Boise
Kendall, Nellie G. ....	Instructor in English, S. D. S. C.

Locke, Francis J., Ass't Mgr. Western Electric Co. ....	38 W. 61st St., New York, N. Y.
Mathews, Oscar R. ....	Expert, Dry Land Agr., Newell
Mayland, Amy ....	Died Feb. 17, 1909, at Lincoln, Neb.
Mayland, George R. ....	P. G. Student, S. D. S. C.
Nelson, Aaron L., Traveling Electrician, With G. E. Co., Brookings	
Nilsson, Edward, Artist, Capital Engraving Co. ....	219 W. Edwards St., Springfield, Ill.
Olberg, Fred C. ....	Druggist, Ballard, Wash.
Perry, William J. ....	Elec. Eng., Corozol, Canal Zone
Soreng, Edward M., Electrician, with Briggs-Stratton Co. ....	198 15th St., Milwaukee, Wis.
Sperb, John J. ....	Civil Eng., Woodburn, Ore.
Ulrich, Darwin William, Electrical Engineer ....	2605 Cal. Ave., Seattle, Wash.
Underwood, Beatrice ....	Watertown
Underwood, Loto (White), Brooklyn Botanical Gardens ....	Brooklyn, N. Y.
Weeks, Gordon A., Electrical Engineer ....	711 Post St., Hotel Robbins, San Francisco, Cal.
West, Florence E. ....	Hill Top Farm, Rhinebeck, N. Y.
Whitehead, Lindsey W. ....	Civil Eng., Dedham, Mass.
Williams, Ruby ....	Teacher, 557 S. Spring St., Los Angeles, Cal.

### PHARMACY GRADUATES.

Murphy, James P. ....	Druggist, Rapid City
Hoch, Joseph L. ....	Druggist, Scotland
Olberg, Fred C. ....	Druggist, Ballard, Wash.
Quiggle, Ernest J. ....	Pharmacist, Groton

### Class of 1909.

### MASTER OF SCIENCE.

Mathews, Oscar R. ....	Expert, Dry Land Agr., Newell
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### ELECTRICAL ENGINEER.

Elliott, Bruce ....	Manual Training Teacher, Hibbing, Minn.
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### MECHANICAL ENGINEER.

Schaphorst, Wm., Technical Advertising ....	Woolworth Building, New York City
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### BACHELOR OF SCIENCE.

Bacon, Eva (Paulson) ....	Castlewood
Bushnell, Edna ....	Teacher, Touchet, Wash.
Camp, Fred ....	Farmer, Winfred, Mont.
Catlett, Winifred ....	Brookings
Champlin, Manley ....	Asst. Prof. of Agronomy, S. D. S. C.



Clarke, Roy .....	Chicago, Ill.
Coughlin, Chas., Supt. Construction, Briggs-Stratton Co. ....	
.....	258 Milwaukee St., Milwaukee, Wis.
Denhart, Cecil .....	Grain Dealer, White
Erwin, Ada .....	Brookings
Evans, Iva (Morrison) .....	Brookings
Furnstahl, John .....	Civil Engineer, Ajo, Ariz.
Jensen, Harvey .....	Insurance and Real Estate, Fargo, N. D.
Jones, Robert .....	Lawyer, Milbank
Kremer, Alvin .....	Bookkeeper, U. S. Nat'l Bank, Portland, Ore.
Lane, Lloyd .....	Farmer, Beresford
McKeown, Ralph .....	Farmer, Sentinel Butte, N. D.
Marquis, Sidney, Electrical Engineer .....	
.....	590 68th Ave., West Allis, Milwaukee, Wis.
Matheny, Chester, Elec. Eng. ....	
.....	With Briggs and Stratton Co., Milwaukee, Wis.
Odland, John .....	Farmer, Sentinel Butte, N. D.
Palm, Ellen (Olson) .....	Norden
Peirce, Ruth .....	Music Teacher, Brookings
Phillips, Geo. ....	Y. M. C. A. Sec., S. D. S. C., Brookings
Sarvis, Johnson .....	Special Agent, Dept. of Agr., Mandan, N. D.
Sperb, Frank .....	Civil Engr., Woodburn, Ore.
Swering, Joe .....	Electrical Engineer, Brookings
Treacy, Timothy, Catholic Priest .....	
.....	487 Mich. Ave., N. E., Washington, D. C.
Vernlund, Carl, Physician and Surgeon .....	
.....	Hartford Hospital, Hartford, Conn.
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.	
Wickre, Jacob .....	Farmer, Langford
Wright, Mary (Dutcher).....	706 N. 12th St., Corvallis, Ore.

### PHARMACY GRADUATES.

Abbott, Guy S. ....	Druggist, Yale
Buck, Ervin .....	Druggist, Wessington, Springs
Crosby, LeRoy .....	Pharmacist, Hitecock
Dickey, James .....	Druggist, Iroquois
Hage, Christian .....	Druggist, Toronto
Wilson, Frank M. ....	Druggist, Harlem, Mont.
Youngberg, Guy E. ....	Asst. in Chem. S. D. S. C.

### Class of 1910.

### MASTER OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon .....	
.....	Mass. Gen. Hosp., Boston, Mass.
Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College ....	
.....	706 N. 12th St., Corvallis, Ore.
Youngberg, Guy E. ....	Asst. in Chem., S. D. S. C.

**MECHANICAL ENGINEER.**

Hofstetter, George, Inst. in Manual Training .....  
 .....Govt. School, Box 487, Manila, P. I.

**BACHELOR OF SCIENCE.**

Atkinson, Fay .....Farmer, White  
 Barber, Floyd .....Civil Engineer, Rogers Bldg., Vancouver, B. C.  
 Biggar, Howard H. ....U. S. Dept. of Agr., Washington, D. C.  
 Crothers, Harold, Inst. in Elec. Eng., U. of Wisconsin .....  
 .....1809 Ray St., Madison, Wis.  
 Crothers, Ralph .....Farmer, Badger  
 Fickle, Walter .....Died Jan. 26, 1911, at Blunt  
 Fridley, Ray .....Manager Fridley's Garage, Brookings  
 Grotta, Edwin .....Implement Dealer, Esmond  
 Johnson, Charles .....Hardware Merchant, Hetland  
 Johnson, Milla (Anderson) .....New England, N. D.  
 Kartrudge, Inga .....Teacher, Hardwick, Minn.  
 Kelly, T. B. ....Music Student, 324 E. 17th St., Minneapolis, Minn.  
 Lothrop, Elmer .....Electrical Engineer, Redfield  
 Lloyd, Robert, Elec. Contr., 1131 Van Nuys Bldg., Los Angeles, Cal.  
 Matheny, Allie (Woledge) .....Minot, N. D.  
 Matheny, Fred .....Civil Engineer, 1731 13th Ave., Seattle, Wash.  
 Morrison, Joseph.....Agr. Expert, Sub Station, Highmore  
 Nagel, Herman, Research Specialist, with Douglas Starch Co....  
 .....Cedar Rapids, Ia.  
 Ort. A. A., Civil Engineer, 601 Western Union Bldg., Chicago, Ill.  
 Palm, Andrew .....County Agricultural Agent, Watertown  
 Sexauer, Elmer .....Grain, Brookings  
 Sheldon, Nettie (Atkinson) .....White  
 Wahl, Walker W. ....Farmer, Cartersville, Mont.  
 Welch, Cecile .....Asst. in Music, S. D. S. C.  
 Wohlheter, Vern .....Attorney, Sisseton  
 Yocom, Frank .....Inst. in Manual Training, Holtville, Cal.

**PHARMACY GRADUATES.**

Brown, Geo. B. ....Farmer, Clark  
 Goldthrop, George .....Druggist, Conde  
 Morrison, Joseph .....Agricultural Expert, Sub Station, Highmore  
 Williams, Arthur .....Pharmacist, Sturgis

**Class of 1911.****MASTER OF SCIENCE.**

Sarvis, Johnson .....Special Agent, Dept. of Agr., Mandan, N. D.  
 White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.

**BACHELOR OF SCIENCE.**

Balmat, John.....	Civil Engineer, 2614 Agnes St., Kansas City, Mo.
Catlett, Marguerite .....	Brookings
Cooledge, Leslie ....	Instructor, Mich. Agr. College, Lansing, Mich.
Cottingham, Jay .....	Lumberman, Sioux City, Iowa
Erwin, Ruth (Bibby) .....	State College, Pa.
Finley, Vollmar .....	Inst. in Agr., Redwood Falls, Minn.
Fridley, Bess (Fromme) .....	Blacksburg, Va.
Fridley, Richard ....	Died Aug. 23, 1912, at Lake Benton, Minn.
Fromme, Fred, Prof. of Bot., Va. Inst. of Technology, Blacksburg	
Gropengieser, Fred .....	Asst. Bank Cashier, Onida
Haas, Carrier (Quinn) .....	Arlington
Hallen, Harold .....	Electrical Engineer, Ord, Neb.
Huntemer, Percy .....	Inst. in Agr., Melrose, Minn.
Jarman, Mabelle .....	Inst. in Dom. Sci., Detroit, Minn.
Johnson, Clifford .....	Died September, 1912, at Huron
Knutson, Geneva (Flittie) .....	Brookings
Ladd, Amy .....	Physical Director, 1007 Grant St., Carthage, Mo.
Mathewson, Lynn, Mech. Engr., 6023 Woodland Ave., 2 Apt., Chicago	
McMillan, Orville .....	Färmer, Alpena
Meharg, Max .....	Inst. Man. Training, Park City, Utah
Mitchell, Harry, Elec. Engr., 2933 Girard Ave., S., Minneapolis, Minn.	
Odland, Ole M., Theological Student, St. Anthony Pk., St. Paul, Minn.	
Peterson, Helen .....	Teacher, Stockholm
Plocker, Florence (Shelden).....	Seneca
Quinn, Roy .....	Inst. in Agr., Fairfax, Minn.
Randall, Frank .....	Mech. Engr., Aberdeen
Sherwin, Muriel (Stoll) .....	Brookings
Starring, Cecil, Asst. in Hort., Mont. Agr. College, Bozeman, Mont.	
Swenehart, John .....	Inst. in Agr., Crandon, Wis.
Throop, Lotta (Odland) .....	Sentinel Butte, N. D.
Tinker, Mabel .....	Brookings
Wilson, R. O. ....	Registrar, Mont. Agr. Col., Bozeman, Mont.

**PHARMACY GRADUATES.**

Fellows, Carl .....	Druggist, White Lake
Martin, Earl S. ....	Merchant, Oldham
Serles, Earl .....	Asst. in Pharmacy, S. D. S. C.
Shea, Henry ...	Asst. in Chemistry, Montana State College, Bozeman
Vis, Heyme .....	Pharmacist, Stickney

**Class of 1912.****BACHELOR OF SCIENCE.**

Atwood, Geo. B. ....	Veterinarian, Arlington
Bibby, Irwin J., Asst in Dairying, Penn. State Col., State College	
Bisbey, Guy R. ....	Botanist, Purdue Univ., Lafayette, Ind.

Dachtler, Fred J. ....	Farmer, Sturgis
Edson, Ray W. ....	With Gen. Elec. Co., 24 Baker St., Lynn, Mass.
Erdmann, Henry E. ....	P. G. Student, U. of Wis., Madison, Wis.
Granger, Paul F., ....	Engineer, Long Beach, Cal.
Hathaway, Floyd C., Instructor in Agr. ....	
.....	Man. Training School, Ellendale, N. D.
Jensen, Russell C. ....	Ice Manufacturer, Watertown
Kremer, Henrietta (Furnstahl) ....	Ajo, Ariz.
Larson, John E., Field Agronomist, Ore. Agr., Col. ....	
.....	135 25th St., W., Corvallis, Ore.
Marchant, Guy R. ....	Elec. Engr., 323 W. 23rd St., New York City
Oakland, Irwin S., Student Northwestern School of Dentistry...	
.....	Chicago, Ill.
Peck, Arthur R., Elec. Eng., 16 Campbell Ave., Schenectady, N. Y.	
Pence, Clay, Elec. Salesman, 313 Penwood Ave., Wilksburg, Pa.	
Reeve, John E., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.	
Revell, Grace ....	Instructor, S. D. S. C.
Sauder, William O. ....	Forestry, Saguache, Colo.
Schaphorst, Ben, Law Student, 1003 E. Huron St., Ann Arbor, Mich.	
Skinner, Lila, Inst. in Home Economics, U. of Ohio, Columbus, O.	
Sparks, Henry ....	Civil Engineer, Mitchell
Stearns, Arthur J. ..	Elec. Engr., 16 Hecla Blk., Edmonton, Alberta
Welker, Verne E. ....	Electrical Engineer, Bagley, Minn.

### PHARMACY GRADUATES.

Bacon, Harry ....	Pharmacist, Edgemont
Christianson, Helen ....	Druggist, Volga
Clark, Robt. W. ....	Died in Sioux Falls, March 26, 1916
Farnham, Beatrice ....	Druggist, Waubay
Farrar, Vere ....	Pharmacist, Langford
Grant, Clyde ....	Pharmacist, Kasson, Minn
Holstrom, Will ....	Pharmacist, Huron
Holleman, William ....	Pharmacist, Springfield
Leavitt, Ethel ....	Pharmacist, Milbank
Morton, Richard ....	Pharmacist, New Effington
Serles, Raymond ....	Pharmacist, Salem

### Class of 1913.

### BACHELOR OF SCIENCE.

Basgen, Fred ....	Structural Engineer, Goodwin
Binnewies, Edward R. ....	Asso. Prof. of Chem., S. D. S. C.
Brigham, Ruth ....	Brinklow, Md.
Cole, Glenn H. ....	Farmer, Gary, S. D.
Dunn, Everett W. ....	Civil Engineering, Eldora, Iowa
Engstrom, Carl ....	Electrical Engineer, Hutchinson, Minn.
Faulkner, Hugh ....	Farmer, Burkmere
Fowlds, Matthew ....	Asst. in Agronomy, S. D. S. C.



Freiberg, George, Research Fellow, Mo. Bot. Gardens, St. Louis, Mo.	
Greenly, Maurice G., Sci. Teacher, 1036 Green St., Honolulu, Hawaii	
Gurslee, Chris. B., Inst. in Northwestern School of Dentistry	
.....	729 Roseoe St., Chicago, Ill.
Heiser, Agnes K. (Yunker) .....	Hecla
Huyek, Nina B., Instr. in Dom. Sci., State Nor. School, Springfield	
King, Stanley .....	Civil Engineer, Watertown
Kremer, Ralph C. ....	Ajo, Ariz.
Landweer, Earl .....	Electrical Engineer, Hartford
McHugh, Frank James .....	Farmer, West Point, Miss.
Matheny, Hazel A. ....	Conde
Morrow, Strayer (Sauder).....	Saguache, Colo.
Morrison, Guy E. ....	Agr. Expert, Brookings
Nilsson, Anna C. ....	Teacher, Henning, Minn.
Nord, Roy A., Law Student, 1003 E. Huron St., Ann Arbor, Mich.	
Olson, Thos. G. ....	Elec. Eng., Rebecca St., Wilkinsburg, Pa.
Pier, Clarence L. ....	Dairy Inspector, Brookings
Rilling, Harry M. ....	P. G. Student, S. D. S. C.
Sanderson, Harry M. ....	Ass't. in Agronomy, S. D. S. C.
Shanley, Clarence .....	Deputy Dairy Inspector, Brookings
Shea, Henry M., Chemist Montana State College, Bozeman, Mont.	
Shepard, Helen (Atwood) .....	Arlington
Sloan, Edith, P. G. Student University of Wisconsin, Madison, Wis.	
Somers, Grace .....	Inst., S. D. S. C.
Sponholz, Lydia (Britzius) .....	Park Rapids, Minn.
Templeton, Mabel (Johnson) .....	Hetland
Wood, Ruth A. ....	Inst. School of Agrl., S. D. S. C.

### PHARMACY GRADUATES.

Eidsmoe, Clark T. ....	Pharmacist, Arlington
Johnson, Arthur F. ....	Pharmacist, Springfield, Minn.
Lawler, Frank M., Pharmacist, with L. T. Dunning Co., Sioux Falls	
Null, Ralph L. ....	Pharmacist, Miller
Simpson, Wm. R. ....	Pharmacist, Flandreau
Soule, Roy H. ....	Druggist, Farmer
Tommerraasen, Corne .....	Pharmacist, Madison
Wornson, Walter A., Medical Student, 280 11th St., Milwaukee, Wis.	

### Class of 1914.

### BACHELOR OF SCIENCE.

Armstrong, Lillian, Instructor in Home Economics, Elmore, Minn.	
Armstrong, Inez, Instructor in Home Economics, Farmington, Minn.	
Ausman, Leslie V. ....	County Agr. Agent, Clark
Britzius, Arno .....	Inst. in Agriculture, Park Rapids, Mich.
Bushey, Alfred, P. G. Student, Purdue Univ. ....	
.....	210 Waldron, St., Lafayette, Ind.
Casley, Lulu .....	High School Instructor, Bryant



Chappell, Vincent ....Asst. in Dairying, Iowa State Col., Ames, Iowa  
 Clifford, Perry .....Farmer, Cresbard  
 Dulitz, Helen, Inst. in Dom. Science, 615 Boren Ave., Seattle, Wash.  
 Elliott, Robert .....Registrar, S. D. S. C.  
 Gilbertson, Geo. ....Asst. in Entomology, S. D. S. C.  
 Gotthold, Roy .....Manual Training, Howard Lake, Minn.  
 Grinols, Hazel .....Inst. Dom. Sci., Breckenridge, Minn.  
 Halladay, Clinton, Civil Engineer .....

.....With Rock Island Ry., 6930 Eggleston Ave., Chicago, Ill.  
 Hartgering, Frances .....Inst. Dom. Sci., Black Duck, Minn.  
 Hegdahl, Paul .....Farmer, Bruce, Mont.  
 Heck, Emil, Asst. in Civ. Eng., Purdue Univ., West Lafayette, Ind.  
 Hofstetter, Clarence .....Inst. Manual Training, St. Maries, Idaho  
 Knutson, Charlie O., Electrician, 431 Delaware Ave., Rochester, Pa.  
 Legler, Edward V., Instructor Manual Training, Faribault, Minn.  
 Esther Luebke .....Inst. Domestic Science, Stevensville, Mont.  
 Persun, Francis J. E. ....Inst. in Agr., Atwater, Minn.  
 Sexauer, Laura .....Teacher, Brookings  
 Shepard, Albert D., Asst. in Chem. U. of Illinois, Champaign, Ill.  
 Slightam, Kate .....Inst. in Dom. Science, Monroe, Wis.  
 Sherwood, Reginald .....Asst. in Chemistry, S. D. S. C.  
 Sloan, Sam .....County, Agr. Agt., Webster  
 Somers, Ruth (Haugen) .....Brookings  
 Valentine, Vey .....County Agr. Agt., Ft. Pierre  
 White, Henry D. ....Supt. of Schools, Peever  
 Wilkins, Scott ....Asst. in Agronomy, Iowa State Col., Ames, Iowa  
 Wood, Nina (Sloan) .....Webster  
 Wills, Ernest V., Electrician .....

With Westinghouse Mfg. Co., 512 Kelly Ave., Wilkinsburg, Pa.

### PHARMACY GRADUATES.

Eng, Julius .....Pharmacist, Flandreau  
 Kadinger, Lewis .....Pharmacist, Vienna  
 McDougal, Tyrell, .....Britton  
 Nelson, Lewis .....Student, S. D. S. C.  
 Ray, Winifred .....Pharmacist, Brookings  
 Shaw, Albert J. ....Pharmacist, Miller  
 Sivertson, Anna .....Druggist, Pierpont

### Class of 1915.

### MASTER OF SCIENCE.

Binnewies, Edward .....Instr. in Chem., S. D. S. C.  
 Shea, Morris Henry .....Chemist, Montana State College, Bozeman  
 Sherwood, Reginald.....Asst. in Chem., S. D. S. C.  
 Sloan, Samuel L. ....County Agent, Webster  
 Mayland, George .....Agr., Brookings

**BACHELOR OF SCIENCE.**

Bolland, Jens .....Farmer, Pierpont  
 Caldwell, Florence .....Instr. Dom. Sci., Dickinson, N. D.  
 Caldwell, Lacey .....Inst. in Agr., Park Rapids, Minn.  
 Clarke, Bruce .....Pharmacist, Pierre  
 Cooley, Hazel .....Instr. in Dom. Sci., Howard  
 Culhane, Alexander .....Asst. in Dairying, S. D. S. C.  
 Culhane, James .....Manual Training, Red Lake Falls, Minn.  
 Drury, Lillian .....Secretary, Chamberlain  
 Freeman, John .....Farmer, Rapid City  
 Gardner, Harry .....Instr. in Agr., State Normal, Spearfish  
 Gilbert, Gladys (Ortmayer) .....Mitchell  
 Graham, William B. ....Farmer, Freeport, Minn.  
 Hale, Ruth .....Instr. in Dom. Sci., Fairchild, Wis.  
 Iverson, Carold, Asst. in Dairying, Iowa State College, Ames  
 Johnson, Carl J. ....Student in C. E., Univ. of Wis., Madison  
 Jones, A. Patti ....Student, 1728 4th St., S. E., Minneapolis, Minn.  
 Keck, Dallas, .....Instr. in Agr., Red Lake Falls, Minn.  
 Kremer, Frank .....Law Student, Univ. of Michigan, Ann Arbor  
 Lanphier, Ira .....Student in C. E., Univ. of Wisconsin, Madison  
 Lynch, Arthur .....Asst. in Dairying, S. D. S. C.  
 Nixon, Jessie .....Teacher, St. Paris, Ohio  
 Nord, Florence, .....Instr. in Dom. Sci., Peever, S. D.  
 Pilmer, Miller .....with Des Moines Elec. Co., Des Moines, Ia.  
 Potter, Ernest C., Theological Student, Moody Bible Inst., Chicago, Ill  
 Sterles, Earl R. ....Asst. in Pharmacy, S. D. S. C.  
 Wornson, Walter, Medical Student, 280 11th St., Milwaukee, Wis.

**PHARMACY GRADUATES.**

Abbott, Walter G. ....Pharmacist, Tyndall  
 Clark, Bruce E., .....Pharmacist, Pierre  
 Colliton, Ora A. ....Pharmacist, St. Paul, Minn.  
 Giannonatti, Elene .....Pharmacist, Ludlow  
 Haugen, Martin Bernhard .....Pharmacist, Hartford  
 Little, Guy Almond .....Druggist, Brandt  
 Loesch, William Patrick .....Druggist, Bruce  
 Olson, Edward Furness .....Student, S. D. S. C.  
 Randall, Harry Eugene .....Pharmacist, Arlington  
 Tolagson, Clarence Ferrold .....Pharmacist, St. Louis, Mo.

# Student List

---

## GRADUATE STUDENTS

Bolland, Jens	Agr.	Pierpont
Carpenter, Abbie	H. E.	Seattle, Wash.
Gilbertson, George	Agr.	Brookings
Jackson, Thomas J.	Agr.	Crow Creek
Lynch, Arthur	Agr.	Brookings
Martin, John	Agr.	Newell
Mayland, George	Agr.	Brookings
Rilling, Harry	Agr.	Brookings
Serles, Earl	G. S.	Salem
Sherwood, Carlton	H. E.	Clark
Sherwood, Reginald	G. S.	De Smet
Wimple, Dilla E.	G. S.	Beresford

## COLLEGE STUDENTS

### SENIORS

Abbott, Cleveland	Agr.	Watertown
Allison, Arthur	M. E.	Cavour
Anderson, Georgia	H. E.	Rapid City
Austin, Ethel	H. E.	Brookings
Avery, Blanche	H. E.	Alexandria
Bergeim, Joseph	G. S.	Brookings
Caldwell, Kate	H. E.	Brookings
Calkins, Fred	E. E.	Miller
Chapman, Daphne	G. S.	Alexandria
Dawes, Adelia	H. E.	Fulton
Dott, Delia	H. E.	Salem
Evers, Clarence	G. S.	Bigstone
Fish, Warren G.	M. E.	Ipswich
Fridley, Harry	Agr.	Brookings
Fryer, Julia	H. E.	Doland
Gold, Ralph	E. E.	Bigstone
Greene, Bernice	H. E.	Parker
Greeves, Bertha	H. E.	Miller
Grudem, William	M. E.	Brookings
Hanten, Matt	Agr.	Watertown
Heiser, Marie	H. E.	White
Humphrey, Francis	G. S.	Howard
Jennings, Hollace	Agr.	Estelline
Jerlow, Morris	Agr.	Carthage
Johnston, Ralph	Agr.	Rapid City
Kennard, George	Agr.	Brookings

Knutson, Robert	.....Agr.	.....Brookings
Lanphier, Eva	.....H. E.	.....Milbank
Laxson, Leroy	.....Agr.	.....Canton
Yunch, Edward	.....Agr.	.....Brookings
Lynch, Edward	.....H. E.	.....Brookings
Miller, Harold	.....G. S.	.....Brookings
Mills, Erma Davis	.....H. E.	.....Brookings
Nelson, Lewis E.	.....Py.	.....Oldham
Petersen, Harold	.....M. E.	.....Sioux Falls
Rishoi, Alfred	.....Agr.	.....White
Rowe, Charles	.....G. S.	.....Sioux Falls
Rowe, Nellie	.....H. E.	.....Sioux Falls
Sheehan, Bernard	.....Agr.	.....Aberdeen
Slaatta, Emma	.....H. E.	.....Wilmot
Slaymaker, Elizabeth	.....G. S.	.....Brookings
Sloan, Janet	.....H. E.	.....Brookings
Smith, Homer	.....G. S.	.....Egan
Waltner, Benj. P.	.....Agr.	.....Freeman
Warner, Harry	.....Agr.	.....De Smet
Weber, George	.....G. S.	.....Farmer
Wing, Leshar	.....M. E.	.....Aladdin, Wyo.

## JUNIORS

Ainsworth, Ernest	.....Agr.	.....Brookings
Anderson, Eldon	.....Agr.	.....Pierre
Anderson, Leon	.....Agr.	.....Rapid City
Bennett, L. L.	.....G. S.	.....Canton
Browning, Lenore	.....G. S.	.....Brookings
Browning, Ruth	.....G. S.	.....Brookings
Chappell, Mabel	.....H. E.	.....Brookings
Cook, Orlan	.....E. E.	.....Clear Lake
Cunningham, Ray	.....G. S.	.....Conde
Dakin, Norman	.....Agr.	.....Brookings
Doughty, Walter	.....Agr.	.....White
Dunn, Olin	.....Agr.	.....Sisseton
Evans, Roy L.	.....E. E.	.....Brookings
Glennon, Daniel C.	.....Agr.	.....Huron
Gregory, Eva	.....H. E.	.....Alexandria
Gullick, Blanche	.....G. S.	.....Brookings
Heiser, Elizabeth	.....H. E.	.....White
Hill, Joe	.....Agr.	.....Mitchell
Holliday, Faye	.....H. E.	.....Brookings
Holliday, Lloyd	.....Agr.	.....Brookings
Holmes, Clara	.....G. S.	.....Brookings
Johnson, Ralph	.....Agr.	.....Hetland
Jones, Horace	.....Agr.	.....Mitchell
Karlstad, C. H.	.....Agr.	.....Dempster
Keating, Pearl	.....H. E.	.....De Smet

Kopperud, Harmon	Agr.	Lake Preston
Kornder, Howard	E. E.	Alexandria
Landers, J. A.	Agr.	Hinze, Miss.
Langdon, Hazel	Py.	Clear Lake
Lanphier, Harriett	H. E.	Milbank
Lee, Vera	H. E.	Brookings
Lothrop, Orlin	E. E.	Academy
McCoy, Dell	C. E.	Miller
Malone, Robert	C. E.	Huron
Mathiesen, Homer	Agr.	Watertown
Miller, Henry J.	M. E.	Hudson
Mills, Omer	G. S.	Wall
Morgan, Della	H. E.	Armour
Nord, Daisy	H. E.	Brookings
Oslon, Edward	Py.	Alcester
Petersen, Axel	Agr.	Sioux Falls
Riis, Jens	Agr.	Sindbjerg, Denmark
Rudd, Charles	E. E.	Orient
Shaw, Happy	H. E.	Madison
Sherwood, Aubrey	Agr.	De Smet
Sloan, Lyle	E. E.	Alexandria
Skinner, Cecil	Agr.	Brookings
Smith, Harry A.	E. E.	Miller
Stevens, Leo J.	C. C.	Sioux City, Ia.
Stoddart, Mattie	H. E.	Brookings
Styer, Clarence	E. E.	Huron
Swenchart, Millie	H. E.	Brookings
Swift, Eugene	Agr.	Brookings
Temmey, Katheryn	G. S.	Onida
Wagner, Colman	Agr.	Selby
Waltner, Adolph	Agr.	Freeman
Wattson, Donald	Agr.	Chamberlain
Westgate, Louis	Py.	Adrian, Mich.
Winright, George	Agr.	Alexandria
Ziegler, Arlene	H. E.	Brookings

### SOPHOMORES

Ahlers, Naomi	H. E.	Webster
Aney, Roy L.	Agr.	Peever
Anderson, Adlai	Agr.	Mitchell
Anderson, A. Edward	Py.	Watertown
Ashbaugh, Alfred	Agr.	Brookings
Ayer, Horace	Agr.	Vermillion
Bacon, Grace	H. E.	Brookings
Beals, Edna	H. E.	Brookings
Berglind, Axel	Agr.	Brookings
Boswell, Mildred	H. E.	Castlewood
Bulger, Jacob	Agr.	White



Bunday, Ray	G. S.	Brookings
Burton, Starling	Py.	Springfield
Cable, Franzella	H. E.	Hudson
Caldwell, Jessie	H. E.	Brookings
Carson, Franklin	M. E.	Cherry Creek
Case, Joyce	H. E.	Hot Springs
Collinge, Vernie	Agr.	Sturgis
Corkill, Clifford	Py.	Hurley
Coughlin, Thomas	Agr.	Carthage
Dalton, Grace	G. S.	Hecla
Dewing, Sara	H. E.	Brookings
Dibble, Robert	Agr.	Beresford
Dokter, Garrett	Agr.	Andover
Drury, Joseph	Agr.	Chamberlain
Durfee, Rossiter	Agr.	Huron
Eberlein, Frank	Agr.	Aurora
Evans, Margaret	H. E.	Brookings
Frease, Hazel	H. E.	Brookings
Frease, Kathryn	H. E.	Brookings
Gates, Edgar	Agr.	Rapid City
Gates, Leon F.	Agr.	Rochester, Minn.
Gaylord, Clair	G. S.	Brookings
Gilbert, Charles	Agr.	Clark
Ginsbach, Clark	Agr.	Hartford
Goddard, Bertin	Agr.	Hot Springs
Greeves, Ida	Sec.	Miller
Grinols, Mavis	H. E.	Brookings
Grinols, Violet	G. S.	Brookings
Hanson, Hazel	G. S.	Brookings
Hemingway, Robert	Py.	Mattoon, Wis.
Hewett, Howard	Agr.	Arlington
Holzman, Albert J.	Py.	Bowdel
Hood, Kenneth L.	Agr.	Groton
Hoon, Glenn	Agr.	Kadoka
Hoover, Harold	Agr.	Brookings
Horsfall, Alice	G. S.	Flandreau
Hougen, Sherman	C. E.	Wilmot
Hough, Orilla	H. E.	Brookings
Hutchinson, Ethel	H. E.	Webster
Hyde, Hara	G. S.	Brookings
Kneebone, John	Agr.	Chisholm, Minn.
Ladd, Leonard	G. S.	Brookings
Lasell, Leola	G. S.	Waubay
Layson, Stanley V.	Agr.	Brookings
Lenocher, Paul	Py.	Bushnell
Lister, Paul B.	Agr.	Bixby
Lynn, Jennie	H. E.	Huron
McFadden, Edgar	Agr.	Webster

McKee, Lynn	Agr.	Aberdeen
Mann, Lyman L.	Agr.	Clark
Mathews, Hubert	G. S.	Brookings
Michaels, Ernest	C. E.	Watertown
Miller, Arthur	Agr.	Madison
Nelson, Arthur	Agr.	Rochester, Minn.
Peterson, Edward	Py.	Viborg
Pickett, H. Hubbie	C. E.	Brookings
Pier, Lenora	H. E.	Woonsocket
Poage, Ellis	G. S.	DeSmet
Randall, Elizabeth	H. E.	Brookings
Rasmussen, Ethel	Py.	Lake Preston
Reid, Phyllis	H. E.	Castlewood
Revell, James	Agr.	Brookings
Rilling, Elsie	H. E.	Brookings
Rugg, Georgia	H. E.	Artesian
Saum, Donald B.	M. E.	Brookings
Scadden, Richard	Py.	White
Severson, Florence	H. E.	Brookings
Shepard, James	G. S.	Brookings
Simons, Stella	H. E.	Castlewood
Spawn, Elmo C.	E. E.	Chester
Steensland, Theodore	Agr.	Beresford
Strachan, Thomas	Agr.	Chelsea
Swenson, J. Delbert	Agr.	Fulton
Tabor, Floyd S.	Py.	Garretson
Thelin, Guy	Agr.	Sioux Falls
Tompkins, Arthur	Agr.	Wyoming, Ia.
Urton, Raymond	Agr.	Colton
Ustrud, Ida	H. E.	Watertown
Waffle, Fern	G. S.	Marion, Ia.
Woodruff, Lewis	Agr.	Wessington
Woodruff, Victor	Agr.	Miller

### FRESHMEN

Alberty, Joseph	Agr.	Parker
Aldrich, Dorothy	G. S.	Bigstone
Anderson, Alvia	G. S.	Brookings
Anderson, Glenn	Py.	Watertown
Anderson, Leslie	G. S.	Brookings
Atkinson, Ray	C. E.	Brookings
Austin, Guy	Agr.	Brookings
Bacon, Lulu Mae	H. E.	Gettysburg
Bakke, Benjamin	E. E.	Howard
Bastian, Elias D.	Agr.	Frankfort
Bergeim, Frank	G. S.	Brookings
Bergstresser, Grant	G. S.	Wentworth
Bittner, Albert	Py.	Chelsea

Blakely, Clifford	Agr.	Brookings
Boehmer, J. Willis	Agr.	Fulton
Brown, Cecil	Agr.	Brookings
Browne, Barnard	Agr.	Mitchell
Browning, Albert	G. S.	Brookings
Bryant, Gladys	H. E.	Andover
Bucholz, Adolph	G. S.	Brookings
Bucholz, Rudolph	Agr.	Brookings
Cannon, Kittie	H. E.	Woonsocket
Carlisle, Frances	H. E.	Brookings
Carroll, William C.	Agr.	Huron
Ching, Melvin	Py.	Castlewood
Cole, Lynn	G. S.	Brookings
Coplan, Max	Agr.	Watertown
Cordiner, Waneta	H. E.	Clear Lake
Crawford, Dell	E. E.	Rochester, Minn.
Criswell, Robert L.	G. S.	Martinsburg, W. Va.
Crofoot, Mentha	G. S.	Webster
Crofoot, Vanita	H. E.	Webster
Cunningham, Beulah	H. E.	Brookings
Daniels, Blair	H. E.	Ipswich
Danielson, Percy W.	Agr.	Hendricks, Minn.
Davis, Neal	Py.	Pierre
Dawson, Thomas	Agr.	Hawarden, Ia.
Dibble, Paul G.	G. S.	Beresford
Doolittle, Chester	Agr.	Ipswich
Drew, Jesse	Agr.	Chamberlain
Erp, Earl	Agr.	Canton
Fairchild, Walter L.	Agr.	Milbank
Farley, Earl	Agr.	Milbank
Farrell, Leon	Py.	Dell Rapids
Faulkner, Drew	M. E.	Berkmere
Fenn, Leonard	Agr.	Brookings
Fisher, Max P.	Agr.	Watertown
Ford, Lucile	Py.	Davis
Francis, Mazie	Sec.	White
Gage, William	Agr.	Sioux Falls
Gilbert, Paul	Agr.	Rochester Minn.
Gilbertson, Robert	Agr.	Sioux Falls
Gilby, Herbert L.	Py.	Tulare
Gloeckler, Wm. A.	G. S.	Menno
Goldy, Mark	Agr.	Canton
Gooch, Wilbur	G. S.	Brookings
Green, Carroll	G. S.	Brookings
Greening, John	Py.	Milbank
Halvorson, Harry	Agr.	Brookings
Hamilton, Homer	G. S.	DeSmet
Hardy, Harold	Py.	Clark

Harper, William	Agr.	Canton
Healy, Roger	Agr.	Langford
Hicks, George W.	G. S.	Java
Holm, Olga	H. E.	Webster
House, Everett	Py.	Rapid City
Hubbart, Erma	Mus.	Brookings
Huchindorf, Clara	H. E.	Pierson, Ia.
Hurlburt, Roy	Agr.	Raymond
Hutchinson, Florice	Sec.	Webster
Hutton, Lynn	Agr.	Egan
Jackson, Clark	E. E.	Dell Rapids
Johnson, Alma	Sec.	Brookings
Jordahl, Erling	Agr.	Mt. Vernon
Kennedy, Benjamin	Agr.	Canton
Kenyon, Robert	Agr.	St. Lawrence
Knox, Frank	Agr.	Aberdeen
Kvenberg, Spray	M. E.	Reville
Langdon, Floyd	Agr.	Clear Lake
Larson, Ora A.	H. E.	Brookings
Law, Stanley	Agr.	Clear Lake
Lee, George	Agr.	Watertown
Lee, Ruby	G. S.	Comfrey, Minn.
Linn, Lela	H. E.	Brookings
Litchfield, Lois	G. S.	Blakwell, Okla.
Loucks, William	G. S.	Trent
McDougall, Portia	H. E.	Britton
McGregor, Donald	G. S.	Washta, Ia.
Marshman, Clinton	C. E.	Brookings
Moore, Maurine	Mus.	Woonsocket
Morton, Joy	H. E.	Brookings
Mossman, Marion	M. E.	Sisseton
Neal, Frank	G. S.	Brookings
Nelson, Edmund	G. S.	Estelline
Nelson, Sivert	Agr.	Gayville
Neville, Earl	M. E.	Warner
Niekerson, Mary S.	Py.	White
Nielsen, Arthur	Py.	Rapid City
Noel, Claude	Py.	Kensett, Ia.
Noonan, William	M. E.	Redfield
Norman, Margaret	G. S.	Brookings
Olson, Florence	H. E.	Webster
Perso, Ruth	H. E.	Brookings
Peterson, Orvis	Agr.	Brookings
Peterson, Ruth	G. S.	Brookings
Phelps, Mary B.	Sec.	Brookings
Platt, Ida	H. E.	Viborg
Poole, Edith	Sec.	Brookings
Potter, Earl	E. E.	Carthage

Poulson, Clyde	Py.	Castlewood
Pultz, Andrew	M. E.	Brookings
Putnam, Arthur	Agr.	Timber Lake
Randall, Pearl	H. E.	Brookings
Reedy, Ernest	Agr.	Beresford
Reeve, Evert	Sec.	Howard
Robbins, Walter	Agr.	Carthage
Ronning, Selma	Sec.	Brookings
Rother, Hildegard	H. E.	Huron
Rottluff, Karl	Py.	Sioux Falls
Salisbury, James	Agr.	Mitchell
Sanders, Harry	Py.	Garretson
Sehad, Ernest	Agr.	Appleton, Minn.
Scott, Millard	Agr.	Artesian
Seubert, Wilbur	Agr.	Brookings
Shaw, Inez	G. S.	Estelline
Sherwood, Dorothy	G. S.	Brookings
Shinn, Elvin	E. E.	Carthage
Simmons, Forest	Agr.	Brookings
Skiff, Hazel	H. E.	Brookings
Sletten, Anthony	Py.	Carthage
Somers, Esther	H. E.	Brookings
Spurling, Dorothy	H. E.	Brookings
Stevenson, J. Lee	Agr.	Vermillion
Street, Thomas M.	Agr.	Albee
Swenehart, Delmer	G. S.	Brookings
Thompson, Albert	Py.	Brookings
Tilley, Leavitt	Agr.	Spencer
Toy, Horace O.	Sec.	Andover
Utterbach, T. J.	G. S.	Belvidere
Valentine, George	Agr.	White
Van Dervoort, Harry	Agr.	Milbank
Walker, J.	E. E.	Carthage
Walseth, Edwin T.	G. S.	Clear Lake
Wardwell, Orin	G. S.	Harrisburg
White, Helen	H. E.	Woonsocket
Wiles, Glenn	E. E.	Trent
Williams, Clayton	E. E.	Lake Preston
Woodward, Ralph	Agr.	Watertown
Wood, Laura	H. E.	Brookings
Wood, Milton	Agr.	Brookings
Yeamans, Bessie	H. E.	Vienna

### SPECIALS

Anderson, Hilda	Piano	Brookings
Blanchard, Mary	Piano, Voice	Brookings
Calef, Dorothy	Piano	Estelline
Colliton, Dollie	Piano	Brookings



Ferguson, Helen	Piano	Harvey, N. D.
Field, Erastus	Cornet	Brookings
Gilbertson, Gurina	Art	Brookings
Gilbertson, Mary	Art	Brookings
Johnson, Mrs. I. B.	Voice	Brookings
Layson, Mrs. Nellie	Piano	Brookings
Youngberg, Guy	Violin	Brookings

## PREPARATORY STUDENTS

### FOURTH YEAR

Albertson, Helen	Pierson, Iowa
Arneson, William	Oldham
Bacon, Mabel	Brookings
Berg, Arnold	Stockholm
Blakely, Mrs. C. H.	Brookings
Brown, Walter L.	Walker, Mo.
Chenoweth, Grace	Brookings
Countryman, Olive	Spencer
Crofoot, Gladys	Webster
DeWalt, Elsie	Brookings
DeWalt, Pearl	Brookings
Deane, Harry	Beresford
Grady, William F.	Ethan
Hansen, Eva	Brookings
Hanson, Ross P.	Withee, Wis.
Hemmer, Matt	Aurora
Hemsted, Esther	Gettysburg
Johnson, Esther	Brookings
Keck, Marvin	Brookings
Keck, Myrtle	Brookings
Nusbaum, Fern	Pulaski, Iowa
Odland, Victor	Meckling
Onstine, Everett	Flandreau
Parker, Leonard	Hazel
Peck, Clifford	Hazel
Peddicord, Floyd	Brookings
Smith, Clarence	Henry
Trumm, Archie	Hayti
Walpole, Robert	Springfield
Willrodt, Harold	Chamberlain
Wilson, Madge	Brookings
Witzel, Roy B.	Letcher
Wolber, Oscar	Brookings
Beals, Daniel	Brookings
Bierman, Chris	Mansfield
Button, Dana	Burke
Cooley, Haldon	Garretson

## THIRD YEAR

Dunnermann, Edward	Smithwick
Eidam, Marshall	Forest City
Eneke, Lou	Verdi, Minn.
Jacobson, Dollie	Brookings
Kock, Cornelius	Isabel
McKillop, Frank	Canistota
Moore, Ellen	Newport
Ondell, Manoah	Conde
Phillips, Rowland	Philip
Pope, Clarence	Miles City, Mont.
Worden, Winnie	Brookings

## SECOND YEAR

Aronson, Alfred	Stockholm
Collins, Josephine	Brookings
Deeg, Neta	Huron
Doupe, Hazel	Waubay
Handur, Eddena	Brookings
Huke, Edwin	Naples
Knutson, Sigurd V.	Carthage
Merriman, Grace	Carpenter
Nusbaum, Olin	Pulaski, Iowa
Oyloe, Gerhart	Brookings
Rhenke, Ernest	Crandon
Scarlett, Ethyl	Brookings
Shoemaker, Matie	White
Steele, Nellie D.	White Rock
Turner, Aris	Brookings

## FIRST YEAR

Alley, Minnie	Huron
Binger, William	Tulare
Burnison, Sam E.	Alpena
Carson, Donald	Bradley
Duerre, Dewey	Butler
Encke, Rosa	Verdi, Minn.
Fisk, Kennon	Sioux Falls
Greenly, Jennie	Brookings
Heglie, John	New Effington
Hemsted, Elizabeth	Gettysburg
Hinkle, Lillie	Brookings
Houseman, Jacob	DeGrey
Jackson, Harold G.	Oacoma
Kenyon, Clifford	St. Lawrence
Kirk, Bill	Sioux Falls
Lee, Henry	Brookings

Lien, Myrtle .....	Brookings
Porter, Paul .....	Onida
Purdy, Ruth .....	Brookings
Rude, Ida .....	Brookings
Sanders, Cecilia .....	Brookings
Seagreen, Olive .....	Turton
Vik, Kalmar .....	Dell Rapids
Wilts, John .....	Brookings

### MUSIC STUDENTS

Aldrich, Dorothy .....	Piano .....	Big Stone
Anderson, Hilda .....	Piano .....	Brookings
Anderson, Alvia .....	Piano .....	Brookings
Atkinson, Ray .....	Voice .....	Brookings
Bacon, Lulu .....	Piano .....	Gettysburg
Bacon, Mabel .....	Piano .....	Brookings
Bapp, William E. ....	Violin .....	White Rock
Belk, Vernon .....	Trombone .....	Henry
Berry, Earl .....	Violin .....	Delmont
Bishop, Julius .....	Piano .....	Montrose
Bjerke, Elmer .....	Clarinet .....	Andover
Blanchard, Mary .....	Piano, Voice .....	Brookings
Burnison, Sam .....	Voice .....	Alpena
Calef, Dorothy .....	Piano, Voice .....	Estelline
Cannon, Kittie .....	Piano .....	Woonsocket
Carlisle, Frances .....	Piano .....	Brookings
Carroll, William C. ....	Voice .....	Huron
Christensen, Ada .....	Piano .....	Center Point
Collins, Josephine .....	Violin .....	Brookings
Colliton, Dollie .....	Piano, Voice .....	Brookings
Cordiner, Waneta .....	Piano .....	Clear Lake
Crofoot, Gladys .....	Piano, Voice .....	Webster
Crofoot, Mentha .....	Piano .....	Webster
Crofoot, Vanita .....	Voice .....	Webster
Countryman, Olive .....	Piano, Voice .....	Spencer
Dalton, Grace .....	Piano, Violin .....	Hecla
Doner, David .....	Trombone .....	Gorman
Fenn, Leonard .....	Clarinet .....	Brookings
Ferguson, Helen .....	Piano .....	Harvey, N. D.
Fjeld, Erastus .....	Cornet .....	Brookings
Fryer, Julia .....	Voice .....	Doland
Gates, Edgar .....	Violin .....	Rapid City
Gilbert, Charles .....	Voice .....	Clark
Gooch, Wilbur .....	Piano .....	Brookings
Hamilton, Homer .....	Violin .....	DeSmet
Heglie, John .....	Voice, Violin .....	New Effington
Hewett, Howard .....	Voice .....	Arlington
Holm, Olga .....	Piano .....	Webster

Hubbart, Erma	Voice	Brookings
Huchendorf, Clara	Piano	Pierson, Ia.
Hutchinson, Florice	Piano	Webster
Jacobson, Helen	Piano	Montrose
Johnson, Mrs. I. B.	Voice	Brookings
Kaufman, Albert	Voice	Marion
Kennedy, Benjamin	Cornet	Canton
Kenyon, Robert	Piano	St. Lawrence
Kneebone, John	Voice	Chisholm, Minn.
Knight, Floyd	Violin	Thomas
Knox, Charles	Clarinet	Binder
Knox, Maynard	Violin	Binder
Layson, Mrs. Nellie	Voice, Piano	Brookings
Liedtke, Roland	Violin	Butler
Linn, Lela	Voice	Brookings
Lynn, Jennie	Voice	Huron
McGregor, Donald	Violin	Washta, Ia.
Moore, Ellen	Piano	Newport
Moore, Maurine	Piano	Woonsocket
Moorhouse, Lorenda	Piano	Watertown
Morton, Joy	Voice	Brookings
Norman, Maragret	Piano, Voice	Brookings
Olson, Florence	Voice	Webster
Ondell, Manoah	Trumpet	Conde
Oyloe, Gerhart	Voice	Brookings
Paulson, Signus	Trombone	Lily
Peters, Dorothy	Piano	Granville, Ia.
Peterson, Norman	Horn	Fedora
Pier, Lenora	Voice	Woonsocket
Purdy, Ruth	Piano	Brookings
Rebrud, C. Walter	Trumpet	Ipswich
Rezac, Julia	Piano	Ida
Rhenke, Ernest	Voice, Violin	Crandon
Reid, Phyllis	Voice	Castlewood
Rovang, Isabel	Piano	Bryant
Rundell, Alta	Piano	Hurley
Saum, Donald B.	Clarinet	Brookings
Sherwood, Dorothy	Piano, Voice, Violin	Brookings
Simons, Stella	Piano	Castlewood
Smith, Harry	Flute	Miller
Stegeberg, Earl	Violin	Woonsocket
Stitt, Carroll	Cornet	Hitchcock
Turner, Aris	Piano, Voice	Brookings
Ustrud, Ida	Voice	Watertown
Valentine, George	Voice	White
Waffle, Fern	Piano	Marion, Ia.
Wagner, Colman	Violin	Selby
Witzel, Roy	Piano, Voice	Letcher

Yeamans, Bessie .....	Piano .....	Vienna
Youngberg, Guy .....	Violin .....	Brookings

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## SCHOOL OF AGRICULTURE

### FOURTH YEAR

Berry, Earl E. ....	Delmont
Griffith, Gar .....	Cresbard
Jencks, Arden L. ....	Bancroft

### THIRD YEAR

Amsden, George .....	Groton
Anderson, Ida .....	Tulare
Andressen, Cornelius .....	Tea
Belk, Vernon H. ....	Henry
Berg, Harry .....	Stockholm
Bishop, Julius .....	Montrose
Bjerke, Elmer .....	Andover
Brown, A. Roy .....	Yankton
Carley, Robert .....	Ambarrass, Wis.
Chrisler, Kenneth .....	Harrisburg
Corothers, John .....	Clear Lake
Crisman, Leo B. ....	Armour
Doner, David .....	Gorman
Dvorak, Frank .....	Redfield
Goodwin, John S. ....	Yankton
Halverson, Alma .....	Kenneth, Minn.
Hatlestad, Ida .....	Garretson
Hawes, Hazel .....	Sherman
Janssen, George .....	Castlewood
Jones, Charles S. ....	Kirley
Knudson, Anna B. ....	DeSmet
McFadden, Joseph .....	Huron
McMahon, Russell .....	Bruce
Moen, Louis .....	Effington
Moyle, Edwin .....	Westport
Nord, Alfred .....	Milbank
Otto, Irving C. ....	Chamberlain
Paulson, Joseph .....	Brandt
Peterson, Philip .....	Brookings
Peterson, P. D. ....	Virgil
Peterson, William .....	Lily
Powers, Harry .....	Delmont
Rundell, Alta .....	Hurley
Scott, Lester .....	Clark
Sloat, Judd .....	Lowry
Smith, Joseph .....	Sioux Falls



Sueltz, Arthur .....	Groton
Tyler, Arthur .....	Renner
Vearrier, Maude .....	Virgil
Wolverton, Don .....	Doland

## SECOND YEAR

Ackley, Bliss .....	Bryant
Amsden, Wallace .....	Groton
Anderson, Melvin .....	Valley Springs
Andrews, Freeman .....	Lake Andes
Bapp, William E. ....	White Rock
Bevington, James E. ....	Ree Heights
Bierman, George .....	Mansfield
Bisgard, Roy .....	Waubay
Blodgett, Roy N. ....	Gayville
Bush, Emmit .....	Colome
Christofferson, Anna .....	Lake Preston
Corothers, James .....	Clear Lake
Crisman, Roy .....	Armour
Eaton, Simon .....	Miller
Frandsen, Josephine .....	Brookings
Freeburg, Myrtle .....	Carpenter
Glenn, J. Albert .....	Canistota
Griffith, Victor .....	Bryant
Hanson, Albert .....	Elk Point
Hawes, Belle .....	Sherman
Hawks, Walter .....	Pedro
Hoogshaugen, William .....	Parker
Jensen, James .....	Erwin
Johnson, Clifford .....	Brookings
Jones, Harvey L. ....	Delmont
Knox, Charles .....	Binder
Lewis, Cecil E. ....	Ashton
Merriman, Arthur .....	Carpenter
Miles, Lynn .....	Conde
Neyhart, Earl .....	Gorman
Peterson, Norman .....	Fedora
Petry, Kathryn .....	Hawarden, Ia.
Putzke, Edna .....	Humboldt
Putzke, Lawrence .....	Humboldt
Ravndal, G. B. ....	Novah
Robbins, Albert .....	Spencer
Rundell, Howard .....	Hurley
Rundell, Leslie .....	Hurley
Shult, Raymond .....	Doland
Schwartz, Arthur .....	Miller
Shank, Ray .....	Aurora
Sisson, Newell .....	Sioux Falls

Sohrt, John O. ....	Rockham
Stine, Robert W. ....	Webster
Stitt, Carroll ....	Hitchcock
Stitt, Harold ....	Hitchcock
Strunk, Bernhard ....	Irene
Swenson, Alfred ....	Ethan
Tate, Chester ....	Brookings
Tate, May ....	Brookings
Thompson, Louis B. ....	Mission Hill
Williams, Robert ....	Onida
Wolner, Henry ....	Frankfort
Wolters, Arnold ....	Winfred

### FIRST YEAR

Aldrich, Leta ....	Doland
Amsden, Albert ....	Groton
Anderson, Alice ....	Irene
Anderson, Thyra ....	Hetland
Bailey, Lynn ....	Clark
Barness, Suttcliff ....	Bancroft
Benson, Everett ....	Renner
Bereman Miriam ....	Gary
Boyce, William ....	South Shore
Borsvold, Selma ....	Brookings
Brandle, Oscar ....	Pierpont
Bratager, Ernest ....	Sioux Falls
Bury, Arthur ....	Holmquist
Byrne, Ray ....	Miranda
Carlisle, Agnes ....	Lake Benton, Minn.
Carr, Harold E. ....	St. Lawrence
Carson, Charlotte ....	Bradley
Carson, Lloyd ....	Bradley
Chicoine, Benjamin ....	Jefferson
Christensen, Ada ....	Center Point
Christopherson, Dewey ....	Corson
Cox, Leonel ....	Mitchell
Dahlen, Morris ....	Oldham
Daker, Paul ....	Huron
Dawley, Frederick ....	Sioux Falls
Doner, Cameron ....	Gorman
Edwards, Raymond ....	Cardon
Eggen, Peter ....	Sisseton
Ellingson, Idor ....	Flandreau
Exe, Inga ....	Brookings
Fasbender, Leo ....	Hendricks, Minn.
Fees, Burton ....	Cottonwood
Flynn, Leo ....	Montrose
Geister, Clarence ....	Parker

Goodhope, Chris .....	Viborg
Halgerson, Floyd .....	Canistota
Hammer, Emma .....	Sherman
Hanson, Clarence .....	Bradley
Heller, Adolph .....	Albee
Hermanson, Jimmie .....	Sherman
Herried, Ernest .....	Summit
Hilkemeier, Erwin .....	Tulare
Hoard, Maude .....	Alcester
Hoard, Ross .....	Alcester
Holland, Willis .....	Northville
Houg, Emil T. ....	Sisseton
Hruska, Louis .....	Tabor
Idso, Nels .....	Keldron
Jacobson, Helen .....	Montrose
Johnson, Eugene .....	Brookings
Johnson, Evan .....	Ludlow
Johnson, Florence .....	Brookings
Johnson, Richard .....	Groton
Johnson, Ruben .....	Groton
Kallander, Emil .....	Burke
Kaufman, Alfred .....	Marion
Kemink, Harry M. ....	Castlewood
Kittleson, Elwin H. ....	Henry
King, Esther .....	Brookings
Knight, Floyd .....	Thomas
Knox, Maynard .....	Binder
Kuld, Pauline .....	Tyler, Minn
Lee, John .....	Pierpont
Lee, Julius O. ....	Colman
Leighton, Robert W. ....	Wentworth
Liedtke, Roland .....	Butler
Matthews, Joseph I. ....	Lily
Meeker, Loren .....	Brookings
Merry, Mildred .....	Dell Rapids
Meyer, Charles .....	Cavour
Metz, Ervin .....	Miranda
Miles, Hazel .....	Conde
Mitchell, Steven .....	Brookings
Mohr, Melvin L. ....	Armour
Montgomery, Ralph .....	Wakonda
Moorhouse, Lorenda .....	Watertown
Morrison, Charlie .....	South Shore
Morrison, Wayne .....	Bonieta Springs
Mueller, Frieda .....	Madison
Neyhart, Helen .....	Gorman
Nichols, Elva .....	Westbrook, Minn.
Nieuwenhuis, James .....	Corsica

Odland, Lawrence	Hurley
Opdycke, Percy	Frederick
Otto, Albert	Tulare
Otto, Herman P.	Tulare
Paul, Nina	Doland
Paulson, Signus	Lily
Pearson, Dewey	Hartford
Peters, Dorothy	Franville, Ia.
Peterson, Earl	Sioux Falls
Peterson, Emma	Brookings
Piper, Albert	Carpenter
Priest, Lloyd D.	Dalzell
Rantapaa, Edward	Nemo
Rebrud, Walter	Ipswich
Rezac, Julia	Ida
Rilling, Russell	Agar
Rovang, Isabel	Bryant
Ross, Donald	Webster
Rude, Cecilia	Brookings
Rude, Theodore	Brookings
Runstad, Hiram	Mt. Vernon
Schmidt, Fred	Alpena
Shult, Myrtle	Doland
Sloat, Ora M.	Lowry
Smith, Carleton	Storm Lake, Ia.
Sorenson, Alfred	Erwin
Stegeberg, Earl	Woonsocket
Stormo, James	Hazel
Strunk, Arthur	Irene
Suttinger, Valentine	Delmont
Taylor, Charles	Minneapolis, Minn.
Thompson, Gerhard M.	Estelling
Tjaden, Samuel	Harrisburg
Wahl, Julius	Bristol
Walker, Harry	Tripp
Weber, Emil	Elkton
Wegner, Paul	Tulare
Welch, Robert M.	Menoken, N. D.
Williamson, Garrett	Plankinton
Woodford, George	Mansfield
Wright, Jesse	Artesian
Wudel, Emanuel	Parkston
Zacharias, August	Brown Valley, Minn.
Zerbel, Floyd	Turton

## SUMMER SCHOOL.

1915.

Albertus, George	Hendricks, Minn.
Alton, Leo	Brookings

Anderson, A. Edward .....	Watertown
Anderson, Laura B. ....	Vilas
Armstrong, Inez .....	Brookings
Armstrong, Lillian .....	Brookings
Armstrong, Loretta .....	De Smet
Arneson, Marie .....	Sawyer, Wis.
Austin, Ethel .....	Brookings
Bakke, Josie .....	Howard
Bennett, L. L. ....	Canton
Berghart, Mae .....	Brookings
Blachford, Ethel .....	Howell
Blakely, Mary .....	Brookings
Booth, Phoebe .....	Litchfield
Brietson, Charmain .....	Brookings
Brietson, Thelma .....	Brookings
Bulger, Minnie P. ....	White
Burnett, Pearl .....	Howard
Burghart, Agnes .....	Roswell
Campbell, Horace .....	Brookings
Chapman, Belle .....	Bryant
Chappell, Bess .....	Brookings
Chappell, Genevieve .....	Brookings
Chappell, Mabel .....	Brookings
Charles, Elizabeth .....	Winfred
Christianson, Mary .....	Jasper, Minn.
Clark, Vera .....	Brookings
Cook, Orlan P. ....	Clear Lake
Cook, Pearl L. ....	Carthage
Crawford, Effie J. ....	De Smet
Culhane, James L. ....	Brookings
Dahl, Elnor .....	Bryant
Davis, Gertrude .....	White
Dawes, Adelia .....	Fulton
Degree, Marie .....	Hendricks
Dimmette, Charles L. ....	Howard
Disrud, Dora .....	Brookings
Dobson, Ida .....	Carthage
Dobson, Nora .....	Carthage
Dornbush, Anna .....	Pollock
Doyle, Margaret .....	Colman
Drees, Bertha .....	Timber Lake
Duggan, Grace .....	Brookings
Eggen, Bertha .....	Vienna
Dunster, Annie .....	Egan
Emly, A. J. ....	Pekin, Ind.
Etting, Doris .....	Brookings
Evers, Clarence .....	Big Stone
Feeney, Ruth .....	Elkton



Fjeld, Kamilla	Brookings
Fountain, Cecile	Flandreau
Gavin, Nelle	Bruce
Gaylord, Clair	Brookings
Geranen, Lempi	Lake Norden
Goddard, Bertin	Hot Springs
Gorman, Mary	Castlewood
Graber, J. H.	Freeman
Green, Carroll	Brookings
Grinols, Hazel	Brookings
Gunderson, Gunda	Arlington
Hanck, Lucile	De Smet
Handur, Eddena	Brookings
Hanson, Hazel	Brookings
Harter, Josie	Canova
Harter, Sophie	Canova
Haugen, Edmund	Brookings
Heiser, Marie	White
Hendrickson, Hilda	Arlington
Hill, George	Brookings
Hill, Lila	Brookings
Hilkemeier, Alma	Tulare
Hilkemeier, Irma	Tulare
Hinch, Iva	White
Holloway, Mabel	Howard
Hoey, Susie	Arlington
Holliday, Faye	Brookings
Honan, Mamie	Brookings
Hopkins, Mae	Farmingdale
Hough, Olga	Glenham
Hubbard, Ethel	Arlington
Hume, Alice B.	Hobart, N. Y.
Humphrey, Francis	Howard
Huyek, Nina	Lebanon
Jarman, Mabel	Brookings
Jarman, Ruby	Brookings
Jarman, William	Brookings
Jarvis, Ruth	Brookings
Jerde, Edith	Brookings
Johnson, Ethel	Brookings
Johnson, Hannah	Ashley, Ind.
Johnson, Stena M.	Erwin
Jones, Patti	Whitewood
Jordan, Jennie	Arlington
Keating, Helen	Flandreau
Keck, Dallas	Brookings
Keck, Myrtle	Brookings
Kidder, P. E.	Bryant

Kirkevold, Petra .....	Hendricks, Minn.
Kjerpeseth, Emma .....	Winfred
Knudson, Otelia .....	De Smet
Kretsinger, Ada .....	Elkton
Krumm, Lillian .....	Bruce
Langdon, Hazel .....	Clear Lake
Larson, Cecilia .....	Howard
Lawler, Helena .....	Howard
Laxson, Leroy .....	Canton
Layson, S. V. ....	Millersburg, Kan.
Leare, Othelia .....	Colman
Lee, Hazel .....	Colman
Lee, Vera .....	Brookings
Lewis, Florence .....	Erwin
Lien, Ruby .....	Brookings
Lindblom, Phebe .....	Canova
Lynch, Ruth .....	Brookings
McBride, Josephine .....	Mankato, Minn.
McQuiston, Esther .....	Carthage
Mackey, Frances .....	Flandreau
Madden, Marietta .....	Redfield
Mann, Bernice .....	Brookings
Martella, Lydia .....	Thomas
Matson, Mamie .....	Willow Lake
Miller, Harold .....	Brookings
Miller, Mary .....	Brookings
Moore, Mabel .....	Howard
Morrell, Eva .....	Carthage
Mulerone, Julia .....	Bryant
Mulerone, Marcella .....	Bryant
Mundt, Wilbur .....	Brookings
Murdick, Ethel .....	Bryant
Nelson, Anna .....	Lake Preston
Nelson, Lewis .....	Oldham
Nelson, Laura .....	Brookings
Nelson, Mary .....	Carthage
Nesmith, Allie .....	Wessington Springs
Nord, Daisy .....	Brookings
O'Connor, Margaret .....	Bryant
Pfeiffer, Helena .....	Volin
Piehl, Martha .....	Esmond
Plumb, Rose .....	Brookings
Prestrude, Claribel .....	Hetland
Pultz, Ella .....	Brookings
Pultz, Mabel .....	Brookings
Pultz, Laura .....	Brookings
Revell, James .....	Brookings
Rilling, Elsie .....	Brookings

Riis, Jens .....	Sindbjerg, Denmark
Rogen, Thelma .....	Sherman
Ronne, A. E. ....	Rapid City
Ross, Lillian .....	Oldham
Rowan, Veronica .....	Artesian
Rowe, Charles .....	Sioux Falls
Rucker, Izetta .....	Colman
Rufenacht, Pearl .....	Brookings
Rufer, Florence .....	Bruce
Sanders, Josie .....	Lake Preston
Scarlett, Ethyl .....	Brookings
Scott, Maude .....	Bryant
Schenegge, Mildred .....	Miller
Scholton, William K. ....	Inwood, Ia.
Schultz, Hattie .....	White
Shanbarker, Clara .....	Brookings
Simmons, Eva .....	White
Skinner, Cecil .....	Brookings
Skinner, Nettie .....	Onida
Slaatta, Emma .....	Wilmot
Sloan, Janet .....	Brookings
Smith, Byrne .....	Brookings
Smith, Leta .....	Bryant
Spry, Helen .....	Canova
Stack, Agnes L. ....	Edgemont
Steece, F. B. ....	Wessington Springs
Stocks, Florence .....	Lone Rock, Wis.
Stordahl, Anna .....	Carthage
Stordahl, Mary .....	Carthage
Temmey, Kathryn .....	Onida
Thayer, Minnie .....	Brookings
Thomas, Mary .....	Fedora
Thompson, Lillie .....	Arlington
Tompkins, Blanche .....	White
Underwood, Florence .....	De Smet
Walklin, Libbie .....	Castlewood
Weber, Anna .....	Brookings
Wesp, Claribel .....	Howard
West, Pearl .....	Bryant
West, Ruby .....	Bryant
West, Ruth .....	Bryant
Wexler, Hyman .....	Brookings
Weber, George .....	Farmer
Willard, Ethel .....	Flandreau
Willard, Louella .....	Flandreau
Williams, Susie .....	De Smet
Wilson, Edith .....	Brookings
Wood, Laura L. ....	Brookings

Zebell, Hilda .....	Estelline
Ziegler, Arlene .....	Brookings

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### SHORT COURSES.

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#### CREAMERY—3 MONTHS

Anderson, Johannes .....	Brookings
Anderson, Holger .....	Huron
Beckley, Walter .....	Terril, Ia.
Bradley, A. M. ....	Milo, Mo.
Dickerson, W. F. ....	Perry, Ia.
Erickson, Victor .....	Clayton, Wis.
Hetrick, J. H. ....	Farmingdale
Linander, Harry .....	Richardson, Wis.
Pederson, H. Skak .....	Cedar Falls, Ia.
Peterson, Lawrence A. ....	Virgil
Peterson, Peter .....	Tyler, Minn.
Rathce, Svend .....	Minneapolis, Minn.
Rishoi, Miller .....	White
Stone, E. E. ....	Geddes
Sundet, P. H. ....	Brookings

#### TRACTION ENGINEERING—5 MONTHS

Brown, Ray Allison .....	Bryant
Carter, Edwin .....	Menno
Christensen, Albert .....	Freeman
Daker, Hubert E. ....	Houghton
Englund, Albert M. ....	Reville
Flick, Ralph L. ....	Mansfield
Frandsen, William G. ....	Fort Pierre
Halls, Simon .....	Sioux Falls
Hassinger, Arthur .....	Bristol
Hawkinson, Elmer E. ....	Holmquist
Hermann, Frank J. ....	Farmingdale
Hobbs, Frank .....	Flasher, N. D.
Hottmann, Jonathan J. ....	Tolstoy
James, Neal A. ....	Valley Springs
Johnson, Nelson .....	Gowen, Michigan
Josund, Martin .....	Mt. Vernon
Kaiser, John .....	Cutmeat
Kampa, Joseph .....	Greenville
Kelty, John T. ....	Plankinton
McGregor, George .....	Yankton
Miller, Alfred M. ....	Sioux Falls
Nelson, Herman .....	Sinai

O'Conner, John J. ....	Bemis
Palmer, William A. ....	Mina
Pankratz, Christ .....	Utica
Reisdorf, Rufus D. ....	Houghton
Ruppell, Frank .....	Alpena
Rust, Lewis .....	Canton
Swanson, Hendrick O. ....	Bristol
Schroeder, Willie .....	Yankton
Smith, Claude .....	Mansfield
Smith, Hugh F. ....	Mansfield
Tollefson, Henry C. ....	Colton
Vik, Martin .....	Beresford

### AUTOMOBILE COURSE

Bortnem, John S. ....	Volga
Bovee, Lloyd L. ....	Turton
Farley, Earl .....	Aurora
Halvorson, Harry .....	Brookings
Johnston, J. T. ....	Brookings
Milne, James .....	Brookings
Hjalmar, Storlie .....	Revillo
Voldal, Nels .....	Volga
Winker, L. E. ....	De Smet
Winzel, Henry .....	Wessington Springs
Woodruff, Ralph .....	Wessington

### FARM AND HOME COURSES—DEC. 27, 1915-JAN. 1, 1916

#### MEN

Armstrong, H. B. ....	Brookings
Austin, G. W. ....	Brookings
Baldrige, F. F. ....	Brookings
Bartle, H. F. ....	Clark
Baxter, H. E. ....	Grover
Bement, E. D. ....	Sioux Falls
Blecker, Henry .....	Brookings
Borgen, John S. ....	Sioux Falls
Borgen, O. ....	Sioux Falls
Bradley, A. M. ....	Milo, Mo.
Breake, H. H. ....	Lake Preston
Brown, F. M. ....	Kampeska
Brown, John M. ....	Aurora
Brown, W. M. ....	Aurora
Bigant, J. F. ....	Brookings
Bullis, Ira N. ....	Quinn
Burdette, J. H. ....	Brookings
Bursvold, Louis .....	Sinai
Bursvold, Rudolph .....	Sinai
Bush, Emmitt .....	Colome



Caldwell, Lyman .....	Brookings
Caldwell, W. A. ....	Brookings
Campbell, J. W. ....	Huron
Carroll, G. H. ....	Miller
Carson, George L. ....	Bradley
Chambers, George .....	Aurora
Chambers, W. S. ....	Aurora
Chase, A. B. ....	Brookings
Cherry, Shirley .....	Altamont
Cleveland, Charles .....	Toronto
Collins, Harry .....	Canistota
Conklin, Lewis .....	Arlington
Cooke, E. A. ....	Aurora
Cotton, Blanche .....	Bruce
Crace, Norton .....	Brookings
Crace, W. M. ....	Brookings
Crawford, Anson L. ....	Brookings
Crawford, George H. ....	Brookings
Crothers, P. R. ....	Badger
Donaldson, Wm. H. ....	Brookings
Dunlop, J. W. ....	Brookings
Elgasen, R. J. ....	Renner
Eliassen, D. ....	Renner
Erickson, Edgar .....	White
Faulkner, F. W. ....	Brookings
Fenn, George W. ....	Brookings
Figert, R. L. ....	Florence
Fjerstad, C. C. ....	Brookings
Flogstad, Hermann .....	Hazel
Ford, Carl C. ....	Brookings
Garrison, G. E. ....	Aurora
Gooder, Albert .....	Orient
Goyke, B. A. ....	Vayland
Gunderson, G. ....	Hurley
Hagen, Alfred .....	Florence
Hagen, Charley .....	Florence
Hammond, F. M. ....	Brookings
Hanian, Carl .....	Brookings
Hatheway, Howard .....	Mitchell
Hay, J. W. ....	Reville
Haynes, A. I. ....	Scotland
Helfenstine, Harry .....	Parker
Henry G. C. ....	Brookings
Henry, Dr. C. M. ....	Yorkton, Sask., C.
Hobbes, Frank .....	Flasher, N. D.
Jermstad, Edward .....	Brookings
Johnson, G. S. ....	Brookings
Johnson, Harlow G. ....	Brookings

Johnson, Willis	Brookings
Jutting, G. H.	Castlewood
Karr, M. A.	Brookings
Keck, Dallas L.	Red Lake Falls, Minn.
Keck, J. A.	Brookings
Keegar, J. J.	Aberdeen
Kennard, G. N.	Brookings
Kester, R. R.	Garner, Ia.
Killian, W. V.	Vilas
Lane, Dr. W. H.	Miller
Larson, T. J.	Brookings
Leemhuis, Henry	Castlewood
Lewis, Knute	Lake Preston
Lindsey, James	Brookings
Linn, A. Gene	Brookings
Lister, P. B.	Brookings
Lund, Knute	Tyler
Lynch, Charles	Brookings
Lynch, C. T.	Brookings
McCaffney, Chas.	Pierre
McCafferty, Ward L.	Roscoe
McDaniel, R.	Spencer
McLain, C. E.	Bryant
Maher, Tom	Brookings
Mehl, Oscar	Sinai
Miller, L. A.	Brookings
Moen, A. O.	Garretson
Murphy, W. H.	Brookings
Nelson, Herman	Sinai
Nelson, R. O.	Toronto
Newton, E. B.	Brookings
Ohair, E. B.	Brookings
Olson, C. C.	Volga
Otterness, O. J.	Brookings
Overseth, John	Canton
Palm, A. W.	Watertown
Parmelee, J. W.	Ipswich
Plumb, W. E.	Bruce
Peirce, E. F.	Brookings
Pilmer, R. A.	Brookings
Ponto, F. W.	Brookings
Prentice, Zack	Brookings
Priest, Lloyd	Dalzell
Quain, M. S.	Toronto
Quinn, J. H.	Badger
Quickstad, O. N.	Toronto
Reppe, Paul H.	Brookings
Rilling, Fred	Brookings

Ripple, Horace .....	Onida
Ripple, H. P. ....	Onida
Rishoi, Nels .....	White
Robbins, Albert .....	Spencer
Rude, N. G. ....	Volga
Rukstad, Albert .....	Florence
Rukstad, Leon .....	Florence
Schaefer, Harry .....	Rockham
Schlunz, J. D. ....	Aurora
Searle, C. H. ....	Brookings
Sloan, John .....	Brookings
Sloan, John Jr. ....	Bowbells, N. D.
Sloan, Sam L. ....	Webster
Slocum, S. F. ....	Brookings
Snyder, F. J. ....	Bruce
Souder, H. C. ....	Milbank
Spurling, E. L. ....	Brookings
Stenwedt, O. J. ....	Thomas
Stone, E. E. ....	Geddes
Sutton, L. W. ....	Brookings
Sutton, M. F. ....	Aurora
Svenson, Gust .....	Ethan
Swift, H. M. ....	Watertown
Taylor, Charles .....	Minneapolis, Minn.
Teske, Emil .....	Rochester, Minn.
Thompson, J. E. ....	Colman
Thornber, James .....	Brookings
Tompkins, A. L. ....	Brookings
Tracy, L. G. ....	Kampeska
Vercoe, L. E. ....	Brookings
Voy, R. A. ....	Flandreau
Walters, W. H. ....	Bruce
Weiss, H. A. ....	Bruce
<b>Willey, E. B.</b> .....	Brookings
Young, Otto .....	Huron
Yule, Charles .....	Brookings

### WOMEN.

Baldrige, Mrs. F. F. ....	Brookings
Chambers, Mrs. W. W. ....	Aurora
Crise, Elizabeth .....	Brookings
Crass, Mrs. Laura .....	Brookings
Crawford, Gladys M. ....	Brookings
Cunningham, Beulah .....	Brookings
Cunningham, Mrs. E. B. ....	Brookings
Farmer, Mrs. E. ....	Brookings
Faulkner, Edith .....	Brookings
Faulkner, Mrs. Mabel .....	Brookings

Fenn, Mrs. Geo. W. ....	Brookings
Gunsalus, Mrs. I. C. ....	Blunt
Haynes, Mrs. A. L. ....	Scotland
Keck, Mrs. J. A. ....	Brookings
Kuld, Mrs. C. ....	Tyler, Minn.
Larson, Mrs. T. J. ....	Brookings
Loomis, Mrs. M. H. ....	Brookings
Luckinbill, Mrs. S. P. ....	Brookings
Lund, Mrs. Knud ....	Tyler, Minn.
McGary, Mrs. L. ....	Brookings
Martin, Mrs. C. ....	Brookings
Miller, Mrs. L. A. ....	Brookings
Myers, Catherine ....	Carpenter
Neal, Mrs. Minnie ....	Brookings
Ness, Mrs. E. O. ....	Volga
Ohair, Mrs. E. B. ....	Brookings
Peddicord, Mrs. E. S. ....	Brookings
Plumb, Mrs. W. E. ....	Bruce
Poole, Mrs. A. A. ....	Brookings
Prentice, Mrs. Z. ....	Brookings
Prowse, Mrs. Jane ....	Brookings
Randlett, Mrs. G. W. ....	Brookings
Reppe, Mrs. Andrew ....	Brookings
Reppe, Elizabeth ....	Brookings
Richard, Mrs. G. A. ....	Brookings
Rudolph, Mrs. S. J. ....	Brookings
Schoenwether, Mrs. A. J. ....	Brookings
Schultz, Mrs. Randolph ....	Aurora
Searls, Mrs. C. H. ....	Brookings
Seubert, Mrs. C. ....	Brookings
Sheldon, Mrs. E. C. ....	Brookings
Spurling, Mrs. E. L. ....	Brookings
Swift, Mrs. A. ....	Brookings
Swift, Mrs. A. E. ....	Brookings
Thayer, Mrs. M. S. ....	Brookings
Young, Mrs. Otho ....	Huron
Yule, Mrs. Charles ....	Brookings

**SUMMARY.**  
**1915-16.**

RANK	Men	Wmn.	Ttl.	Gr.Ttl
Collegiate—				
Post Graduate Students .....	9	3	12	
Seniors .....	29	18	47	
Juniors .....	41	19	60	
Sophomores .....	61	31	92	
Freshmen .....	106	45	151	
Specials .....	2	9	11	
	<hr/>	<hr/>	<hr/>	<hr/>
Total Collegiate .....	248	125	373	373
Preparatory—				
Fourth Year .....	20	13	33	
Third Year .....	11	4	15	
Second Year .....	6	9	14	
First Year .....	14	10	24	
	<hr/>	<hr/>	<hr/>	<hr/>
Total Preparatory .....	51	36	87	87
Music Students .....	39	49	88	88
School of Agriculture—				
Fourth Year .....	3	0	3	
Third Year .....	33	7	40	
Second Year .....	47	7	54	
First Year .....	98	28	126	
	<hr/>	<hr/>	<hr/>	<hr/>
Total School of Agric. ....	181	42	223	223
Summer School .....	29	169	198	198
Short Courses—				
Automobile .....	11	0	11	
Creamery .....	15	0	15	
Traction Engineering .....	34	0	34	
Farm and Home .....	152	47	199	
	<hr/>	<hr/>	<hr/>	<hr/>
Total Short Course .....	212	47	259	259
	<hr/>	<hr/>	<hr/>	<hr/>
Grand Totals .....	760	468	1228	1228
Names Repeated .....	58	66	124	124
	<hr/>	<hr/>	<hr/>	<hr/>
Net Totals .....	702	402	1104	1104



# INDEX

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	Page
Agriculture, School of.....	115
Agricultural Experiment Station.....	122
Agricultural Extension Division.....	124
Art .....	104
Botany and Plant Pathology.....	85
Chemistry .....	90
Civil Engineering .....	70
College Alumni .....	126
Commerce, Department of.....	107
Courses of Study.....	38
Degrees and Certificates.....	36
Department of Instruction.....	50
Animal Husbandry .....	50
Dairy Husbandry .....	51
Veterinary Medicine .....	55
Agronomy .....	56
Horticulture and Forestry.....	59
Education .....	80
Electrical Engineering .....	68
English .....	74
Entrance Requirements .....	31
Entomology and Nature Study.....	88
Expenses of Students .....	103
Faculty .....	5
General Information .....	19
History and Political Science.....	77
Home Economics .....	62
Instructors and Assistants.....	14
Mathematics .....	82
Mechanical Engineering .....	63
Modern Language .....	75
Military Science and Tactics.....	105
Music .....	95
Voice .....	98
Piano .....	99
Violin .....	101
Harmony .....	101
Officers and Employers.....	18
Pharmacy .....	92
Physics .....	83
Preparatory Department .....	111
Public Speaking .....	79
Semester Calendar .....	3
Special Lecturers .....	18
Student Activities .....	26
Student Expenses .....	28
Students, List of.....	148
Summer School .....	118
Traction Engineering, Course of.....	120
Zoology .....	86

## LOCATION

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The State College of Agriculture and Mechanic Arts is located upon an eminence one mile from the business center of the city of Brookings, and four miles from the Big Sioux River. Brookings is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch of the same road making connection with the main line at this point. The city has a population of about three thousand five hundred thrifty, intelligent and hospitable people. It is lighted by electricity and has a complete water and sewer system, owned by the municipality.

The streets are lined with trees and there are very few houses without well kept lawns, upon which are growing trees, beautiful flowering shrubs and plants. It has often been called the City of Homes.

It is a city of clean morals. No saloon has been allowed within its limits for years. In the general election of 1896 Brookings County was the banner county of the state in its vote against allowing intoxicating liquors to be sold in the state. In the spring election of 1898 the proposition to allow saloons within the city limits was defeated by a vote of three to one.



1916  
MARK D. SCOTT PRINT  
SIOUX FALLS, S. D.



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1916/17  
Vol IV

April 1917

No. IX.

South Dakota

# State College of Agriculture and Mechanic Arts

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## BULLETIN

---

Annual Catalog, 1916-1917

With Announcements for the Year 1917-1918

---

Published Quarterly by

**THE SOUTH DAKOTA STATE COLLEGE**

Brookings, S. D.

---

Entered as second-class matter August 10, 1908, at the post-office at Brookings, S. D., under Act of July 16, 1904



# The College Bulletin

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The South Dakota State College Bulletin is published quarterly by authority of the Regents of Education.

The Bulletin contains information in detail relative to the entrance requirements of the different courses of instruction, the schedules of study, lists of instructors of the institution and its administration, equipment, organizations, publications, funds, students' expenses, scholarships, prizes, etc.

The institution includes the following departments of instruction: Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture and Forestry, Veterinary Medicine, Home Economics and Domestic Art, Mechanical Engineering, Electrical Engineering, Civil Engineering, English, Modern Languages, History and Political Science, Public Speaking, Philosophy, Mathematics and Astronomy, Physics, Botany, Entomology and Nature Study, Zoology, Chemistry, Pharmacy, Music, Art, Military Science and Tactics, Commercial Science, the Preparatory Department, and the School of Agriculture. Short special courses of instruction are given in Agriculture, Dairying, Home Economics and Steam Engineering.

In addition to the instructional work the Agricultural Experiment Station and the Agricultural Extension Division are maintained at the College.

The College bulletins are sent free, postage paid, on request. The request should indicate the department concerning which information is desired.

For bulletins and other information address the President, State College, Brookings, South Dakota.



Vol IV

April 1917

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South Dakota

# State College of Agriculture and Mechanic Arts

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## BULLETIN

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**THE SOUTH DAKOTA STATE COLLEGE**

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# College Calendar for 1917-1918

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## FIRST SEMESTER

1917

**June 11-July 20**—Six weeks Summer School.

**September 17-18**—Entrance examinations and registration.

**September 19**—Work of first semester begins at 8 o'clock a. m.

**November 1**—Last day for announcing subjects of theses.

**October 29**—Enrollment in the School of Agriculture.

**November 29-30**—Thanksgiving recess.

**December 20**—Christmas vacation begins at 4:00 p. m.

1918

**January 8**—Christmas vacation ends at 8:00 a. m.

**January 28-February 1**—Examination week.

## SECOND SEMESTER

**February 5**—Second semester begins at 8:00 a. m.

**March 28**—School of Agriculture closes.

**May 20**—Senior vacation begins.

**May 31**—College work closes.

**June 2**—Baccalaureate Sunday.

**June 5**—Commencement exercises at 10:30 a. m.

## Calendar of Short Courses

**January 8-May 31**—Course in farm mechanics.

**January 8-March 15**—Three months creamery course.

**December 31-January 6**—Farm and Home Course.

• 1917 •

JANUARY.

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FEBRUARY.

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DECEMBER.

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## Regents of Education

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Hon. August Frieberg .....	Beresford
Hon. Frank Anderson .....	Webster
Hon. J. W. Campbell .....	Huron
Hon. T. D. Potwin .....	Lemmon

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Hon. G. H. Helgersen (State Treasurer).....	Treasurer

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Hon. T. W. Dwight	Hon. J. W. Campbell
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Statement of the Ownership, Management, Circulation, Etc.  
of South Dakota State College of Agriculture and Mechanic Arts  
Bulletin published quarterly at Brookings, South Dakota, required  
by the Act of August 24, 1912.

Name of	Post office Address.
Editor, G. L. Brown, Dean of College .....	Brookings, South Dakota
Publisher, South Dakota State College of	

Agriculture and Mechanic Arts.....	Brookings, South Dakota
Owners, South Dakota State College of	

Agriculture and Mechanic Arts.....	Brookings, South Dakota
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Known bondholders, mortgagees, and other security holders, holding  
1 per cent or more of total amount of bonds, mortgages, or other  
securities: None.

ELLWOOD C. PERISHO,

President of College.

Sworn to and subscribed before me this 16th day of April, 1917.

R. A. LARSON,

Notary Public.

(Seal)

(My commission expires June 5, 1917.)

## \*Faculty

---

**ELLWOOD CHAPPELL PERISHO, A. M., M. S., LL. D., President.**

B. S., Earlham College, 1887; A. M., Earlham College, 1889; Professor of Mathematics, Guilford College, North Carolina, 1888-1892; scholar, University of Chicago, 1893-1894; fellow, 1894-1895; M. S., University of Chicago, 1895; Professor of Geology, State School, Platteville, Wis., 1895-1903; Professor of Geology, University of South Dakota, and State Geologist, 1903-1914; Dean, College of Arts and Sciences, University of South Dakota, 1907-1914; present position since 1914.

**GEORGE LINCOLN BROWN, Ph. D., Dean, Vice President, and Professor of Mathematics.**

B. S., University of Missouri, 1892; teaching fellow in Mathematics, 1892-1893; M. S., 1893, same institution; fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, 1897-1910; Acting President, South Dakota State College, summer and fall of 1908; Dean of the faculty, 1910; Vice-President, 1913; Acting President, February 1 to August 1, 1914; present position since 1914.

**JAMES WILBUR WILSON, M. S. A., Professor of Animal Husbandry; Director and Animal Husbandman of the Experiment Station.**

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture, Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

**GORDON W. RANDLETT, B. S. A., Director of the Extension Division.**

Graduate of Iowa State Normal School, 1895; B. S. A., North Dakota Agricultural College, 1908; teacher, public schools of Iowa, 10 years; Instructor in Applied Agriculture, North Dakota Agricultural College, 1905-1908; Assistant Professor, same institution, 1908-1909; Director College Extension, same institution, 1909-1915; Superintendent Farmers Institutes, North Dakota, 1913-1915; present position since June, 1915.

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\*With the exception of the President, Dean, Director of the Experiment Station and Director of the Extension Division, the names occur in the order of appointment.



**JAMES HENRY SHEPARD, B. S., Professor of Chemistry; Chemist of the Experiment Station.**

B. S., University of Michigan, 1875; post-graduate student in University of Michigan, 1881-1882; Instructor in Natural Sciences, Ypsilanti High School, Michigan, 1882-1886; present position since 1888.

**HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

**NIELS EBBESEN HANSEN, M. S., Sc. D., Professor of Horticulture and Forestry; Vice Director and Horticulturist of the Experiment Station.**

B. S., Iowa Agricultural College, 1887; M. S., Iowa Agricultural College, 1894; with Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor of Horticulture, Iowa Agricultural College, 1891-1895; studied in Europe, 1894; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898 and 1906-1907; to Siberia, Turkestan and Algiers, 1908-1909; for South Dakota, to Siberia, 1913; Sc. D., University of South Dakota, 1917; present position since 1895.

**HUBERT BERTON MATHEWS, M. S., Professor of Physics.**

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1893-1896; Professor of Physics, 1896-1899; Professor of Physics and Electrical Engineering, 1899-1909; Vice-President, 1904-1906; present position since 1909.

**\*BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.**

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Instructor in Pharmacy, South Dakota Agricultural College, 1895; present position since 1896.

**ADA B. CALDWELL.**

Student, Chicago Art Institute, 1893-1897; of Teachers College.

N. Y. and Chase School of Art, 1903-1904; student in summer schools, Handicraft Guild, Minneapolis, 1905-1906-1907; Commonwealth Art School, Maine, 1910; N. Y. Chautauqua Art School, 1911 and 1912; N. Y. Art League, School of Landscape, 1912 and 1913; present position since 1899.

\*Died April 1, 1917.

**ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.**

B. S., South Dakota Agricultural College, 1892; fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; student, University of Wisconsin, 1898, and summer session, 1907; Instructor in American History, University of Nebraska, summer session, 1909; present position since 1901.

**ROBERT BLACKWOOD FORSEE, Pe. P., Principal of the Preparatory Department.**

Principal of Pedagogy, Western College, Missouri, 1888; Principal of Schools at Elgin, Mo., 1889-1891; at Steffenville, 1892-1893; at Estelline, South Dakota, 1895-1896; County Superintendent of Schools, Hamlin County, South Dakota, 1896-1900; present position since 1901.

**WILLIAM HOWARD POWERS, A. B., A. M., Librarian and Associate Professor of English.**

A. B., Miami University, 1891; A. M., Harvard University, 1899; student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Harwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; member State Library Commission, 1913—; present position since 1905.

**CHRISTIAN LARSEN, M. S. A., Professor of Dairy Husbandry; Dairy Husbandman of the Experiment Station.**

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; studied European dairying, 1900; Dairy Instructor, Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

**MADISON CLAIR BATES, A. M., Professor of English.**

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of

Illinois, 1906-1907, and summer session, 1907; scholar in English, Graduate School, Columbia University, 1909-1910; present position since 1907.

**BYRON BRIGGS BRACKETT, A. M., Ph. D., Professor of Electrical Engineering.**

A. B., Syracuse University, 1890; A. M., Syracuse University, 1893; Certificate of Proficiency in Electrical Engineering, Johns Hopkins University, 1895; Ph. D., Johns Hopkins University, 1897; Teacher of Mathematics, Williamsport, Pa., and Brooklyn, N. Y., 1890-1893; Instructor, Electrical Engineering, Johns Hopkins University, 1894-1897; Instructor, Electrical Engineering, Union College, 1897-1898; Washington, D. C., 1898-1900; Electrical Science, Rutgers College, 1901-1903; Professor of Electrical Engineering, Clarkson School of Technology, 1903-1909; Inspector of Torpedo Cable for U. S. Army, summer of 1898; Electrical Engineer for Rowland Telegraphic Company, Baltimore, Md., 1900-1901; present position since 1909.

**HARRY C. SEVERIN, B. A., M. A., Professor of Entomology and Nature Study; Entomologist of Experiment Station.**

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908; fellow in Zoology and Entomology, Ohio State University, 1908-1909; Assistant to State Entomologist, Illinois, summer of 1909; present position since 1909.

**ROBERTSON COOK, M. E., Professor of Experimental Engineering.**

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; Engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; Instructor in Mechanical and Steam Engineering, South Dakota State College, 1908-1910; Member Am. Soc. M. E., present position since 1910.

**\*SHIRLEY PUTNAM MILLER, B. S., M. A., Professor of Zoology and Rural Sanitation.**

B. S., South Dakota State College, 1903; M. A., University of Minnesota, 1905; student at Minnesota Sea-side Laboratory, Vancouver Island, 1902-1904; Instructor in Zoology, South Dakota State College, 1905-1908; student at the Anatomical-Biological Institute, Berlin, and the University of Munich, 1908-1910; investigator in Russian Zoological Laboratory, Villafranche, on the Mediterranean; fellow assistant, Department of Anatomy, University of Chicago, 1916-1917; present position since 1910.

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\*Absent on leave during 1916-1917 to do advanced work in the University of Chicago.

**GEORGE ARTHUR STARRING, A. B., Agricultural Editor.**

A. B., Huron College, 1907; graduate Huron Business College; student, Rochester Seminary, N. Y., 1907-1908; of University of Chicago, 1908-1909; summer quarter, University of Chicago, 1909; Instructor in Commerce and Economics, Sioux City High School, 1909-1910; Professor of Commerce, South Dakota State College, 1910; present position since 1911.

**ALBERT NASH HUME, B. S. A., M. S., Ph. D., Professor of Agronomy; Agronomist of Experiment Station.**

B. S. A., Purdue University, 1900; M. S., Purdue University, 1902; Live Stock Husbandman, North Louisiana Experiment Station; Instructor in Agriculture, Wenona Agricultural Institute, 1903; Instructor, Associate, Assistant Professor of Crop Production, University of Illinois and Agricultural Experiment Station, 1904-1911; student Leipzig, Germany, winter semester, 1908-1909; student Goettingen, Germany, summer semester, 1909 to winter semester 1910; Ph. D., Goettingen, December, 1910; present position since 1911.

**GARNETT HEDGE, Mus. Bac., Professor of Music.**

Graduated from Des Moines Musical College, Des Moines, Iowa, 1894; post-graduate in same institution, 1896; studied with Karleton Hackett, American Conservatory, Chicago, 1897-1898; taught in American Conservatory, sang with Castle Square Opera Co., and studied with Arthur Beresford, 1898-1899; taught at Heading College, Abingdon, Ill., 1899-1900; Supervisor of Public School Music, Lead and Deadwood (S. D.) schools, 1900-1901; traveled with Minneapolis Symphony Orchestra, 1908-1909-1910; and with Thomas Orchestra, February, 1910; studied summer 1909, with Madame Friedenburg, New York; Dean of Huron College School of Music, Huron, S. D., 1910-1912; present position since 1912.

**CHRISTY WILLIAM MICHEL, A. M., Professor of Botany.**

A. B., Litt. B., Ohio Wesleyan University, 1904; A. M., Harvard University, 1912; elected Austin Scholar in Botany, Graduate School, Harvard University, 1911, and Scholar in Yale University, for the same year; received appointment as assistant in Botany, Harvard University, 1912, and Fellow in Botany in the University of Wisconsin; student Harvard University, second semester of 1905-1906 and the year of 1911-1912; of Ohio State University, 1908-1909; Superintendent of Schools, Mercer, Ohio, 1904-1905; Professor of Biology, Defiance College, 1906-1908 and 1909-1911; present position since 1912.

**HARRY W. EWING, Professor of Physical Education.**

Student University of Nebraska, Academic Courses, 1904-1907;



Assistant Coach, University of Nebraska, 1910-1911; Director of Athletics, Morningside College, 1911-1912; present position since 1912.

**ALBERT JONES WILLIS, C. E., Professor of Civil Engineering.**

C. E., Lehigh University, 1905; Assistant Engineer of Construction and Repair, Bethlehem Steel Co., 1905-1906; Instructor in Civil Engineering, Lehigh University, 1906-1908; Instructor in Civil Engineering, Armour Institute of Technology, 1908-1910; Structural Draftsman with C. M. & St. P. R. R., summer of 1909; Structural Steel Draftsman and Checker with the Guerber Engineering Co., summers of 1910, 1911, 1912, 1914; Instructor in Civil Engineering, Cooper Union, New York City, 1910-1913; in charge of property survey and laying out of public roads in Cambria County, Pa., summer of 1913; Bridge Designer, New York State Barge Canal, summer of 1916; Assoc. M. Am. Soc. C. E.; present position since 1913.

**BELLA SPENCER, A. B., Professor of Modern Languages.**

A. B., Kansas State Univ., 1899; student, University of Goettingen, Germany, 1898-1899; student, University of Zurich, Zurich, Switzerland, 1899-1904; Instructor in Modern Language, City High School, Portland, Oregon, 1904-1905; Instructor in Modern Language, LaSalle-Peru Township High School, LaSalle, Ill.; present position since 1913.

**CHARLES CLINTON LIPP, D. V. M., Professor of Veterinary Medicine; Veterinarian of Experiment Station.**

Student Poland Union Seminary, North Eastern Ohio Normal College; D. V. M., Ohio State University, College of Veterinary Medicine; present position since 1913.

**ERNEST D. STIVERS, B. S., Professor Secondary Agricultural Education; Director of Summer School.**

B. S., Iowa State College, 1901; Science Teacher, High School, Mason City, Ia., 1901-1904; Superintendent of Schools, Parker, S. D., 1904-1910; student special work in Agriculture, Iowa State College, 1910-1911; Principal of Agricultural High School, Prescott, Arkansas, 1911-1912; Agricultural Editor, International Correspondence Schools, Scranton, Pa., 1912-1913; present position since 1913.

**CHARLES F. SCHLATTER, B. S., Professor of Commercial Science.**

Graduate Southern Iowa Normal, 1902; Instructor in Mathematics, Southern Iowa Normal, 1904-1905; Instructor in Pedagogy, Southern Iowa Normal, summer 1905; graduate Gem City Business College, 1906; Superintendent of Schools, Dunlap, Illinois, 1906-1909; Instructor in Commerce, Sioux City High School, 1909-1910; student Drake University, summer quarters, 1909 and 1910; Principal Department of Commerce, LaSalle-Peru Township High



School, LaSalle, Illinois, 1910-1911; student at University of Chicago, summer quarters, 1913 and 1915; B. S., South Dakota State College, 1916; present position since 1911.

**FRANK EMERSON BROWN, A. M., Professor of Public Speaking.**

A. B., Knox College, 1902; A. M., Knox College, 1908; Illinois Representative Interstate Oratorical Contest, St. Paul, 1902; student, Emerson College of Oratory, Boston, 1902-1903; student, University of Chicago, Summer School, 1908; Instructor in English and Oratory, Mercersburg Academy, Mercersburg, Pennsylvania, 1903-1905; Professor of Public Speaking, Drake University, 1905-1914; present position since 1914.

**\*STEPHEN DECATUR van BENTHUYSEN, A. M., Professor of Rural Economics and Sociology.**

Graduate of the Central Normal College and Business Institute, Great Bend, Kansas, 1893; A. M., University of Puget Sound, 1912; Instructor Business Department, Academy, Appleton City, Mo., 1893-1896; Principal Business Department, College, Rich Hill, Mo., 1896-1899; Principal School of Commerce, Grand Prairie Seminary, Onarga, Illinois, 1899-1906; student, School of Commerce and Administration, University of Chicago, 1905; Dean of the School of Commerce, Dakota Wesleyan University, 1906-1915; present position since 1915.

\*Absent on leave during the year 1916-1917.

**CHARLES HARVEY BRADY, A. M., Professor of Education.**

B. S., Indiana Tri-State College, 1902; A. B., University of Indiana, 1907; scholar in Education and Psychology, Graduate School, University of Indiana, 1908; A. M., Columbia University, 1912; scholar in Education, Graduate School, Columbia University, 1914-1915; Principal Consolidated Agricultural High School, Indiana, 1900-1906; Principal High School, Bloomfield, Indiana, 1907-1908; Principal High School, Wabash, Indiana, 1908-1911; Professor of Education, State Teachers' College, Colorado, 1912-1914; Director Secondary Education, University of Indiana, summer school, 1914; present position since 1915.

**MABEL WARD, B. S., Professor of Home Economics.**

B. S., Columbia University, 1910; graduate student, and Assistant in Home Economics, University of Chicago, 1914-1916; Professor of Home Economics, Mississippi State College for Women, 1905-1914; Instructor in Home Economics, University of Mississippi, summer term, 1913; Instructor in Home Economics, George Peabody College, summer quarter, 1914; Instructor in Home Economics, University of Chicago, summer quarters, 1915-1916-1917; present position since 1916.

**JOSEPH MATSON, CAPTAIN, COAST ARTILLERY CORPS, U. S. ARMY, Professor of Military Science and Tactics.**

Student Parsons College, 1897-1898; Sergeant Co. M., 50th Iowa Infantry, April 26 to November 30, 1898, Jacksonville, Fla.; 1st Lieut., 34th U. S. Volunteers, July 5, 1899, to April 17, 1901, Philippine Islands; 2nd Lieut., Artillery Corps, U. S. Army, June 13, 1901, Fort Morgan, Ala.; 1st Lieut., Coast Artillery Corps, June 2, 1903, Portland, Maine; Captain Coast Artillery Corps, January 25, 1907, Fort Monroe, Va., Fort Washington, Md., Fort Hamilton, N. Y.; Graduate Coast Artillery School, 1908; present station since October, 1916.

**JOSEPH GLADDEN HUTTON, B. S., M. S., Associate Professor of Agronomy.**

Graduate of Indiana State Normal School, Terre Haute, 1899; S. B., University of Chicago, 1908; M. S., University of Illinois, 1910; teacher in Indiana District Schools, 1891-1895; Assistant in Biological Laboratory, Indiana State Normal School, 1898-1899; Instructor in Physiology, Indiana State Normal School, 1899-1900; Curator's Assistant, Marine Biological Laboratory, Wood's Hole, Mass., summer, 1901; Principal, Beardstown (Ill.) High School, 1901-1903; Superintendent of Schools, Beardstown (Ill.), 1903-1908; Instructor in Psychology, Indiana State Normal School, summer, 1908; Assistant in Geology and Graduate School in Botany, Geology and Soils, University of Illinois, 1908-1911; Field Assistant, Illinois State Geological Survey, summer, 1909; present position since 1911.

**B. A. DUNBAR, A. M., Associate Professor of Chemistry.**

A. B., Ohio Wesleyan University, 1891; A. M., Ohio Wesleyan University, 1892; Instructor in Mathematics and Physics, Hillsboro Normal College, Hillsboro, Ohio, 1891-1893; Instructor in Physics, High School, Ironton, Ohio, 1893-1895; Supt. of Schools, Michigan, Wyoming, Minnesota and North Dakota, 1895-1910; student in Chemistry, University of Chicago, 1909-1910; Assistant Professor of Chemistry, South Dakota State College, 1911-1912; present position since 1912.

**BENJAMIN LEE THOMPSON, B. Sc., Associate Professor of Animal Husbandry.**

B. Sc. in Agriculture, Ohio State University, 1908; Professor of Animal Husbandry and Dairying, Dunn County School of Agriculture, Menomonie, Wis., 1908-1909; Instructor in Animal Husbandry, South Dakota State College, 1909-1912; present position since 1912.

**HOWARD H. HOY, B. S., M. S., Associate Professor of Physics and Mechanical Engineering.**

B. S., South Dakota Agricultural College, 1896; M. S., South

Dakota Agricultural College, 1903; pursued special work in electrical engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; Instructor in Physics and Electrical Engineering, 1904-1914; Assistant Professor in same departments, 1914-1915; present position since 1915.

**W. ALBERT PETERSON, Mus. Bac., Assistant Professor of Music.**

Qualified as teacher, Illinois Wesleyan Conservatory, 1901; graduate American Conservatory, Chicago, 1909; post-graduate same institution, 1911; pupil of Allen Spencer, pianist, and Adolph Weldig and George Colburn, harmony, counter-point, composition, etc.; Instructor, Huron College, Huron, S. D., 1911-1912; present position since 1912.

**MAUD A. GODDARD, Assistant Professor of Art.**

Student Art Institute, Chicago, 1903; School of Fine Arts, Minneapolis, summer 1907; Commonwealth Art School, Maine, summer 1910; Jewelry School, Ronkonkoma, Long Island, summers 1912 and 1913; Art School, Chautauqua, N. Y., summers 1909 and 1915; Instructor Industrial Art, South Dakota State College, 1903-1914; present position since 1914.

**CARL CHRISTENSEN, Assistant Professor of Music, Violin and Other Instruments.**

Student under Professor Christian Madsen of Copenhagen, Denmark; studied with C. F. Toenniges, of Davenport, Iowa, 1900, 1901; with Alfred Spell, Minneapolis, 1908, 1909; and with William McPhail, Minneapolis, summer of 1912; Instructor in Music, South Dakota State College, 1906-1914; present position since 1914.

**GERTRUDE S. YOUNG, A. B., Assistant Professor of English and History.**

A. B., University of Wisconsin, 1906; summer sessions, Cornell University, 1911 and 1916, University of Chicago, 1912, University of Wisconsin, 1913 and 1915; Instructor in History and English, South Dakota State College, 1907-1914; present position since 1914.

**MANLEY CHAMPLIN, B. S., M. S., Assistant Professor in Agronomy.**

B. S., South Dakota State College, 1909; M. S., same institution, 1914; employed as special agent, 1909, scientific assistant, 1910, and collaborator from 1911 to present time in charge of cooperative cereal investigations, U. S. Department of Agriculture and South Dakota Experiment Station; Assistant General Superintendent of Experiment farms for South Dakota State College since 1911; Assistant in Agronomy, S. D. State College, 1911-1914; present position since 1914.

**CLIFFORD N. MILLS, B. S., A. M., Assistant Professor of Mathematics.**

B. S., Franklin College, Indiana, 1910; graduate student Indiana University, summers 1910 and 1912, fellow, Indiana University, 1913-1914; A. M., Indiana University, 1915; teacher, Public School, Jennings Co., Indiana, 1904-1905; Instructor in Mathematics, Franklin High School, Indiana, 1908-1910; Tutor in Mathematics, Franklin College, Indiana, 1908; Professor of Mathematics, Highland College, Kansas, 1910-1913; Instructor in Mathematics, South Dakota State College, 1913-1914; present position since 1914.

**JOHN A. BONELL, Assistant Professor of Mechanical Engineering.**

Student Stout Institute, 1904, and State Normal School, Oshkosh, Wis., summer 1905; Assistant and Instructor in Farm Mechanics, Marathon County School of Agriculture, Wausau, Wis., 1905-1910; attended Stout Institute, summer 1910; Instructor in Shopwork, South Dakota State College, 1910-1915; present position since 1915.

**WILLIAM MONROE MAIR, Superintendent of Boys' and Girls' Clubs, Extension Division.**

Studied three years in Oberlin College and Theological Seminary; traveled in Europe one year; Principal of Schools, Garretson, S. D., two and a half years; County Superintendent of Schools in Minnehaha County, four years; present position since 1913.

**WARD A. OSTRANDER, B. S., M. S., District Agricultural Agent, Extension Division.**

B. S., Lawrence College, 1911; M. S., University of Wisconsin, 1914; present position since 1914.

**GUY MORRISON, B. S., District Agricultural Agent, Extension Division.**

B. S., South Dakota State College, 1913; present position since 1914.

**EDWARD R. BINNEWIES, B. S., M. S., Assistant Professor of Chemistry.**

B. S., South Dakota State College, 1913; M. S., South Dakota State College, 1915; Assistant in Chemistry, South Dakota State College, 1913-1915; Instructor in Chemistry, 1915-1916; Graduate Student, University of Chicago, summer quarter, 1915; present position since 1916.

**VERN R. JONES, B. S., M. S. A., Assistant Professor of Dairy Husbandry.**

Assistant Dairyman, Washington State College, 1911-1912; B. S. in Dairying, same college, 1912; Instructor in Dairying, same college,



1912-1913; Assistant in Dairy Husbandry, Cornell University, 1913-1915; M. S. A., Cornell University, 1915; Instructor in Dairy Husbandry, South Dakota State College, 1915-1916; present position since 1916.

**FRANK E. McCALL, B. S., Extension Specialist in Horticulture.**

B. S., Horticulture and Forestry, Iowa State College, 1911; with Commercial Nurseries, Idaho and Washington, 1911; manager Berryhill Fruit Farm, Des Moines, Iowa, 1912-1913; Agriculturist, Public Schools, South St. Paul, Minn., 1914-1915; orchardist, Iowa, 1915-1916; present position since 1916.

**JOHN T. E. DINWOODIE, V. M. D., Extension Specialist in Control of Animal Diseases.**

V. M. D., North Dakota Agricultural College, 1909; Student, Veterinary Dept., U. of Pennsylvania, 1913; Assistant Veterinarian, station staff, U. of Minnesota, 1913-1914 and 1915-1916; with Commercial Serum Plant, South St. Paul, 1914-1915; present position since 1916.

**RALPH L. PATTY, B. Di., B. S. in A. E., Extension Specialist in Agricultural Engineering.**

B. Di., Iowa State Teachers College, 1907; B. S. in A. E., Iowa State College, 1916; Instructor in Science, High school, Winterset, Iowa, 1907-1909; Principal, High School, Brookings, S. D., 1909-1913; present position since 1916.

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## Instructors and Assistants

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**FRED C. STOLTENBERG, Florist and Assistant in Horticulture.**

Present position since 1906.

**HOWARD LOOMIS, A. B., Assistant in Agronomy.**

A. B., Albion College, 1909; Instructor in Chemistry and Physics, Union City, Ind., High School, 1909-1910; present position since 1910.

**NELLIE G. KENDALL, B. S., Instructor in English.**

B. S., South Dakota State College, 1908; post-graduate student, South Dakota State College, 1909; graduate of Cumnock School of Oratory, 1911; present position since 1912.

**WM. J. WILSON, Ph. G., Assistant in Serum Production.**

Ph. G., Montreal College of Pharmacy; Member Pharmaceutical Association of the Province of Quebec; present position since 1913.



**GEORGE PHILLIPS, B. S., Student Adviser.**

B. S., South Dakota State College, 1909; scholar, University of Wisconsin, 1910-1911; Instructor in Mechanical Engineering, South Dakota State College, 1912-1914; present position since 1914.

**MATTHEW FOWLDS, B. S., Assistant in Agronomy.**

B. S., South Dakota State College, 1913; Assistant in Entomology, South Dakota State College, 1913-1914; present position since 1914.

**HARRY RILLING, B. S., M. S., Assistant in Agronomy.**

B. S., South Dakota State College, 1913; M. S., South Dakota State College, 1916; present position since 1914.

**REGINALD SHERWOOD, B. S., M. S., Assistant Station Chemist.**

B. S., South Dakota State College, 1914; M. S., South Dakota State College, 1916; Assistant in Chemistry, South Dakota State College, 1914-1916; present position since 1916.

**DILLA E. WIMPLE, B. A., M. A., Demonstrator in Home Economics, Extension Division.**

B. A., University of South Dakota, 1904; M. A., University of South Dakota, 1906; student at Berlitz School of Modern Languages, Chicago, summer session, 1904; Instructor in German, University of South Dakota, 1904-1907; Teacher of rural schools, 1908-1909; Principal of High School, Harrisburg, S. D., 1909-1910; County Superintendent of Schools, Lincoln County, S. D., 1911-1914; Instructor in German, South Dakota State College, 1914-1916; present position since 1916.

**EDWIN H. HUNGERFORD, M. S., Assistant in Dairy Husbandry.**

Graduate Kansas State Agricultural College, 1912; Graduate Assistant in Chemistry, 1912-1913; Fellow in Chemistry, 1913-1914; Master of Science in Chemistry, Kansas State Agricultural College, 1914; present position since 1914.

**GEORGE GILBERTSON, M. S., Instructor in Entomology.**

B. S., South Dakota State College, 1914; M. S., South Dakota State College, 1916; present position since 1914.

**WILSON CRAMER, JR., Instructor in Animal Husbandry.**

Present position since 1914.

**GERTRUDE McKNIGHT, Instructor in the School of Agriculture.**

Present position since 1915.

**T. A. MEEHAN, Specialist in Dairying, Extension Division.**

Present position since 1915.

**HENRIETTA SMITH, Instructor in Violin.**

Present position since 1915.

**ARTHUR LYNCH, B. S., Assistant in Dairy Husbandry.**

B. S., South Dakota State College, 1915; present position since 1915.

**EARL R. SERLES, Ph. G., B. S., Instructor in Pharmacy and Chemistry.**

Ph. G., 1911, B. S., 1915, South Dakota State College; Registered Druggist, South Dakota, 1912; present position since 1915.

**SYLVIA CLISBY, Mus. B., Instructor in Piano and 'Cello.**

Mus. B., Oberlin Conservatory, 1914; Chautauqua and Lyceum work, 1914-1915; present position since 1916.

**MAX M. MAHANY, A. B., LL. B., Instructor in Spanish and Secretary to the President.**

B. A., LL. B., South Dakota State University, 1914; Secretary to the President, 1915-1916; present position since 1916.

**HAROLD MILLER, B. S., Assistant in Zoology and Rural Sanitation.**

B. S., South Dakota State College, 1916; graduate student in Howard School of Public Health, summer of 1916; present position since 1916.

**LEWIS E. NELSON, B. S., Assistant in Zoology and Rural Sanitation.**

B. S., South Dakota State College, 1916; graduate student in Anatomical Institute, University of Minnesota, summer of 1916; present position since 1916.

**IONA BURROWS, B. S., Mus. Bac., Instructor in Pipe Organ and Piano, and Accompanist in the Department of Music.**

B. S., Mus. Bac., Coe College, 1916; present position since 1916.

**IDA ELIZABETH TRIMBLE, Mus. Bac., Instructor in Voice.**

Mus. Bac., Monroe College, W. Va., 1907; Instructor in Voice and Piano, St. James Episcopal School, Alexandria, La., 1910-1911; and at Blackshear Military Institute, 1911-1913; post graduate student, American Conservatory of Music, Chicago, 1916; present position since 1916.

**JOE M. ELDRIDGE, B. S., Instructor in Dairy Husbandry.**

B. S., Iowa State College, 1916; present position since 1916.

**WALDINE B. SCHNEIDER, Ph. B., Instructor in German.**

Ph. B., University of Chicago, 1916; Asst. Supervisor of Rural Schools, Stephens Co., Okla., 1911-1913; Principal High School, Fletcher, Okla., 1913-1914; Asst. in German, Edmond State Normal, 1914-1915; present position since 1916.

**CATHERINE SWIFT, Instructor in Home Economics.**

Graduate of Stout Institute, 1913; Instructor in Home Economics, Mississippi State College for Women, 1913-1916; student of University of Wisconsin, summer session, 1914; of Columbia University, 1916; present position since 1916.

**LOUISE LOCKERLY LEATON, B. S., Instructor in Home Economics.**

B. S., Illinois Wesleyan University, 1912; Instructor in Home Economics, Lombard College, 1912-1916; graduate student, University of Wisconsin, summer session, 1914, and University of Chicago, 1916; present position since 1916.

**ADA B. ERWIN, B. S., Assistant Principal, School of Agriculture, and Instructor in Home Economics.**

B. S., South Dakota State College, 1909; student, Teacher's College, Columbia University, summer session, 1911; Instructor in charge of Domestic Art, South Dakota State College, 1911-1913; student, Teacher's College, Columbia University, 1913-1914; B. S., 1914; Instructor in Home Economics, State Normal School, Stevens Point, Wisconsin, 1914-1915; present position since 1916.

**R. L. WELCH, Assistant in Mechanical Engineering.**

Head of Industrial Department, high school, Somerset, Ky., 1915-1916; present position since 1916.

**CHARLES S. ROWE, B. S., Assistant in Chemistry.**

B. S., South Dakota State College, 1916; present position since 1916.

**N. F. PETERSON, B. A., M. A., Instructor in Botany.**

B. A., University of Nebraska, 1907; M. A., 1911; graduate student, University of Chicago, 1914-1916; Curator of the Herbarium, University of Nebraska, 1907-1909; Assistant and Instructor in Botany, Louisiana State University, 1909-1912, and summer of 1915; Science Teacher, Canal Zone High School, Ancon, Panama, 1913-1914; present position since 1916.

**CARLTON SHERWOOD, B. A., Instructor in the School of Agriculture.**

B. A., University of South Dakota, 1914; Instructor, Fort Pierre High School, 1915; present position since 1916.

**INA SIGLINGER, Instructor in Home Economics.**

Graduate of Stout Institute, 1912; Instructor in Home Economics, public schools, Parker, South Dakota, 1914-1915; and at Webster, South Dakota, 1915-1916; present position since 1916.

**E. GUSSIE KREUTTER, Instructor in the School of Agriculture.**

Graduate Valder Normal School; Principal of High School, Parker, South Dakota, 1906-1908; Instructor, Grammar School, Sioux Falls, South Dakota; Principal, Ward School, same city, 1913-1916; present position since 1916.

**AGNES MORTON, B. S., Assistant in Boy and Girl Club Work.**

B. S., University of Minnesota, 1912; Instructor in Foods and Cookery, School of Agriculture, University of Minnesota, 1912-1917; Instructor in Foods and Cookery, Teacher's Training School, University of Minnesota, 1912-1916; present position since 1916.

**HENRY J. LOANE, Assistant in Military Science and Tactics.**

Sergeant Coast Artillery Corps, unassigned; present position since December 1916.

## SPECIAL LECTURERS

Hon. T. W. Dwight, Regent of Education, Sioux Falls.  
Hon. August Frieberg, Regent of Education, Beresford.  
Dr. Cline, Portland, Oregon.  
Dr. Smith, Washington, D. C.  
Mrs. Anna Smith DeVoe, Tacoma, Wash.  
Ex-Gov. Eberhart, Minneapolis, Minn.  
Secy. Howard Beaver.  
Pres. H. K. Warren, Yankton College.  
Dr. R. G. Strayer, Columbia University.  
Hon. William McMasters, Yankton.  
Mr. Elmer Sexauer, Brookings.  
Hon. A. E. Chamberlain, Aberdeen.  
Prof. Hilton Jones, Mitchell.  
Miss Margaret O'Connell, Minneapolis.  
Mr. Harlan Bushfield, Miller.  
Miss Louise Gleckler, Pierre.  
Hon. M. G. Carlisle, Brookings.  
Hon. A. B. Dalthorp, Volga.  
Hon. Nels Rishoi, Brookings.  
Mr. M. E. Culhane, Brookings.  
Mr. Ben Schaphorst, Brookings.  
Miss Agnes Fenenga, Turkey.  
Col. Lee Stover, Watertown.  
Hon. Arthur Haasche, Watertown.  
Hon. Frank Cannon, Utah.

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## Other Officers and Employees

R. A. Larson	Secretary
Robert Elliott	Registrar
Edith Hubbart	Assistant Librarian
Nina A. Waters	Matron of Dormitory
George E. Purdy	Custodian of Buildings and Grounds
A. T. Larson	Engineer

## Faculty Committees

Faculty Committees will be announced at the beginning of the college year.



# General Information

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## HISTORICAL SKETCH

**Establishment.**—An act of the Territorial Legislature approved February 21, 1881, provided that “an Agricultural College for the Territory of Dakota be established at Brookings, \* \* \* provided that a tract of land of not less than eighty acres be secured and donated to the Territory of Dakota.”

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was opened for use September 24, 1884.

The Enabling Act admitting the state of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the agricultural college, as provided in the acts of congress making donations of lands for such purpose. The acts of congress here referred to are, primarily, the act of July 2, 1862, known as the Morrill Act, providing that 30,000 acres of public land for each representative in congress be given to each state towards “the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts.”

By the Enabling Act of 1889 Congress granted to South Dakota for the Agricultural College 40,000 additional acres, in lieu of a grant that had been made to new states in 1841. Thus the total land grant for the Agricultural College was 160,000 acres.

In the Morrill Act of 1862, such colleges were spoken of as “Colleges of Agriculture and Mechanic Arts.” In order that the name might more nearly conform to the object for which the College was established, the legislature of 1907 changed the name from “The Agricultural College of South

Dakota'' to ''The State College of Agriculture and Mechanic Arts.''

The \*Experiment Station was organized in 1887 under the Hatch Act of Congress, which provided for the establishment of agricultural experiment stations in connection with agricultural colleges. These stations were established for the purpose of conducting experiments and research work in connection with all branches of the agricultural industries of the United States, due regard being paid to the varying conditions and needs of the respective states. It is also their object to aid in diffusing among the people useful and practical information on all subjects connected with agriculture. The South Dakota Station conducts its investigations chiefly along the following lines: Live stock, veterinary science, soils, field experiments, greenhouse work, trees and small fruits, and chemistry of plant growth and foods.

The \*Extension Division was established to carry to the people of the state the results of the work of the College. From its earliest history the College has sent out members of its staff to help the people of the state by addressing meetings, acting as judges at fairs and for agricultural clubs, and in various other ways. The College, however, had no money available to conduct such work in a systematic way until recently. In May, 1914, the Smith-Lever Act was passed by Congress providing \$10,000 annually to each state beginning with July 1, 1914, to be used for agricultural extension work by the State Colleges of Agriculture in co-operation with the United States Department of Agriculture. The act also provides that beginning with July 1, 1915, additional amounts which increase from year to year are to be given to the different states upon the condition that the states appropriate equal amounts to be used in connection with the national fund for extension work.

**Sources of Income.**—A joint resolution passed by the legislature of 1890 accepted the lands granted in the enabling act. These lands were not at once assigned. The commissioner of

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\*See the index for references to additional information concerning the Agricultural Experiment Station and the Extension Division.

Public Lands reported that 64,658 acres had been selected. All have since been selected; very few have been sold. A small amount is received yearly as rental. The first income recorded was \$1,197.71, September 1, 1896. As no school lands may be sold for less than ten dollars an acre, these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will probably be sufficient for the needs of the college.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved by Congress March 4, 1907, provides for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of \$5,000 for the year 1907-1908, which increased \$5,000 each year until it reached \$25,000 per annum. The College, therefore, receives \$50,000 annually from the National Government for instructional purposes.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

The Hatch Act provides that the experiment stations should receive \$15,000 annually from the National Government. This amount has been increased by the provisions of the Adams Act of 1906, so that the experiment station now receives \$30,000 a year for maintenance.

Under the Smith-Lever Act the College receives \$10,000 annually from the National Government for extension work. Under the same act during the next two years the College will receive \$38,030 in addition, on the condition that an equal amount is provided by the state to be used with the national

fund. The State Legislature of 1917 has appropriated \$68,000 to meet this condition and for additional extension work in the State.

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## LOCATION, BUILDINGS AND EQUIPMENT

**The Location.**—The College is located upon an eminence one mile from the business center of Brookings, which has a population of about three thousand five hundred people. The city is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch making connection with the main line at this point.

Brookings is almost an ideal college town. It is lighted by electricity and has a complete water and sewer system. Its streets are lined with trees and its houses have well kept lawns abounding in ornamental shrubs and plants.

It is a city of clean morals. No saloon has been allowed within its limits for years; and the last few times when the question of allowing saloons within the city has been submitted to a vote of the people, it has been defeated by overwhelming majorities.

**The College Buildings and Grounds.**—The college campus upon and about which the college buildings are placed is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary walks and drives. Adjoining on the rear are the horticultural gardens, and to the north and northwest is the college farm.

The oldest building on the campus, called the Central Building, was erected in 1884. This and the other two old buildings, called, during recent years, the North Building and the Experiment Station Building, will in the future be given over to general class room and laboratory purposes.

The Agricultural and Administration Building provides executive offices, an auditorium, laboratories, class rooms and offices for the various agricultural departments.

The Physics-Engineering Building is occupied by the physics and the engineering departments with their various class rooms, laboratories and shops.



The Plant Breeding Building, together with the large Greenhouse, furnishes room for the work that is being conducted by the departments of botany, horticulture and entomology.

The Chemistry-Pharmacy Building, a two-story structure, is occupied by the class rooms and laboratories of those departments.

The Creamery is a two-story building which was almost doubled in size in 1911 by an addition which was made to meet the growing demands upon this department.

The Gymnasium is a two-story building that is used for athletic exercises and military drill during the season when such work cannot be carried on outdoors. In connection with the Gymnasium a tract of land near the campus has been fitted up for outdoor exercises and sports.

Wenona Hall, a splendid brick dormitory for young ladies, stands on a site just across the street from the campus. It will accommodate about sixty women.

Wecota Hall, the new dormitory for young women, has been completed during the year. This building cost \$75,000, and will provide rooms for about one hundred twenty ladies.

The central heating and electric light plant occupies a brick structure in the rear of the campus. The buildings are all heated by steam and lighted by electricity generated in this plant.

Near the campus on the adjoining college farm are located the agricultural and the dairy barns, together with a number of smaller buildings which are devoted to agricultural purposes.

The legislature of 1917 appropriated \$100,000 to complete the Agricultural Hall, \$80,000 for an armory, and \$20,000 for a livestock pavilion. The erection of these buildings will begin during the summer of 1917.

**The Farm and Horticultural Gardens.**—The college farm includes four hundred and sixty acres, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the students may witness and actually participate in this scientific



work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal husbandry. Practical work in experiments involving the best farming practices for this region are given the students.

The Horticultural Gardens comprise about fifty acres adjoining the campus. Here and in the Greenhouse a large amount of work in fruit propagation and plant experimentation is being carried on.

**The Laboratories, Shops and Museums.**—Well fitted laboratories and shops have been provided in all those departments where their use is made necessary by modern educational methods. The value of illustrative materials has been recognized, and numerous departments have made large collections and museums. The equipment of the various departments is described in connection with their work.

**The Library and Reading Room.**—The library, occupying rooms on the first floor of the Central Building, contains over 19,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

**The Postal Facilities.**—The College furnishes first-class postal facilities, the mail of the students being delivered at the college at convenient times during the day, making it unnecessary for them to walk to the city postoffice.

## ORGANIZATION AND GOVERNMENT

**The Board of Regents.**—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who have charge of all of the educational institutions which are maintained either wholly or in part by the state. The terms of office of the regents are each six years and expire at different times, so that the board is a continuous body. Appointments to the board are made by the Governor, with the approval of the senate, “of persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education.”

Among the powers and duties of the regents as defined by law some important ones are, to employ members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

**The Faculty.**—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. The president appoints, at the beginning of each col-

lege year, certain faculty committees which take up such work as may be assigned them by the president and faculty.

In the government of the College the faculty relies chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly and maintain good behavior at all times. Students are not only under the direct supervision of the faculty while on the campus, but are responsible for their conduct wherever they may be.

In order that the work of the College may be rendered as efficient as possible and all relations made harmonious, a set of regulations, chiefly governing matters of classification, has been adopted by the faculty. No set rules are expected to cover every condition that arises, and all students should recognize the importance of co-operation with the faculty in their efforts to make college life helpful to the student body as a whole.

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## STUDENT ACTIVITIES

**Faculty Control.**—While the students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical, social and other activities, the faculty retains an advisory interest in all such matters, and has the right at any time to pass reasonable regulations for the welfare of the College.

**The Student Association.**—The athletic, debating and oratorical interests, and the student publication, the Industrial Collegian, are under the control of the Student Association, which governs these activities by means of a board of control, consisting of students and members of the faculty. This board is organized into the Athletic, the Collegian, and the Debating Councils, each of which directs the respective interests that come under it. A fee of three dollars a semester, or proportional sums for students whose work is arranged in terms shorter than the semester, is charged for membership, which admits the holder to all student exercises under the supervision of the association and pays for a subscription to the Collegian.

**Athletics.**—Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

**Oratory and Debating.**—Each year for a number of years representatives of the college have met students from other institutions in debating contests. The members of the local teams are chosen in a series of preliminary contests in which all are encouraged to take part. There has thus been aroused among the student body a large interest in this kind of work and a healthy rivalry to obtain places on the intercollegiate teams.

Credit for three hours work during one semester is given those who take part in an intercollegiate debate.

A representative of the college is sent each year to the intercollegiate oratorical contest of the state. This student is selected by means of a local preliminary contest. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

In order further to encourage students to enter into these activities, the First National Bank of Brookings, the Farmers' National Bank and the Bank of Brookings have very generously offered cash prizes to be awarded to students who excel along the various lines of forensic work.

**The Student Publications.**—The Industrial Collegian is a weekly paper published by the students of the College. It is intended to be a mirror of student life at this institution, and all phases of college activity have representatives on its staff of editors.

The Jack Rabbit is published annually by the junior class, and is a good representative and exponent of college life.

**The Literary Societies.**—The literary society is an important factor in the education of the student and all are strongly advised to take part in this kind of work. All preparatory students are expected to become members of the Franklin



Society whose work is carried on under the supervision of the preparatory department, and is a preparation for the college societies.

The faculty and various citizens, recognizing the value of literary society work, have contributed several trophies to be competed for by the Athenian, Miltonian and Delphian Societies, which are composed of students of collegiate standing.

**The Christian Associations.**—In the state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student who stands for pure manhood and womanhood to affiliate himself or herself with them. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among the members of the student body. Each association is represented by a local secretary and also by state and international college secretaries.

**Other Student Organizations.**—Among these may be mentioned the Art Club which encourages interest in art by bringing exhibits to the College and in various other ways; the chorus, orchestra, and band, which give a series of musical entertainments during the year; the Agricultural Club, the Engineering Club, the Pharmacy Club and other organizations which promote interest along the various lines of college work.

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## STUDENT EXPENSES

**Tuition and Other Fees.**—The tuition for regular work extending throughout the college year is six dollars per semester, or twelve dollars per year. For information concerning tuition fees for work that is not arranged according to semesters, see the respective courses. A student who enrolls must pay the full tuition for the semester or term. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which the student takes work. Books and other supplies are furnished by the student.

As an inducement to students to register promptly the



Regents have imposed the rule that a tardy enrollment fee of twenty-five cents per day shall be collected of all students who enroll subsequent to the regular day announced for that purpose. However in no case shall the tardy enrollment fee exceed one dollar and fifty cents.

Special fees are charged for instruction in music in the College. (See the department of music.)

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

**Estimate of Expenses.**—An estimate of the yearly expenses of a student is as follows:

Board and room .....	\$200.00
Tuition .....	12.00
Fees in Student Association .....	6.00
Laboratory fees .....	10.00
Books and Supplies .....	25.00
Laundry Expenses .....	20.00
Incidentals .....	25.00
	<hr/>
	\$298.00

Men students are expected to purchase military uniforms which range in cost from \$16.00 to \$18.00.

While the above is considered as a reasonable estimate, many students go through the year on a less amount. Much depends upon the character of the student and the work he is taking.

**Board and Rooms.**—Good rooms and board can be obtained at private houses. The dormitories provide a large number of the young ladies with comfortable homes at reasonable rates. (See the following page for dormitory regulations.) Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students. A list of approved available places for boarding or rooming can be obtained at any time from the President of the College. The Christian

Associations make it a point at all times to assist new students in finding proper living accommodations. If prospective students will write to the Young Men's Christian Association or the Young Women's Christian Association of the College, officers of these organizations will be glad to arrange to meet them at the train and help them to secure boarding and rooming places.

**The Ladies Dormitories.**—The two dormitories, Wenona Hall and Wecota Hall, the latter of which has just been completed, will accommodate about one hundred seventy-five young women. The halls are under the immediate supervision of a preceptress who does everything possible to make a real home for those who live there. The young women are given a large share in the government of the halls, and are thus encouraged to form orderly habits and high ideals of conduct.

Precautions have been taken to reduce danger from fire to a minimum. The buildings are heated with steam, lighted by electricity, and in every respect have the latest improvements and conveniences. Bath rooms, toilet rooms and lavatories are on each floor. In addition, each room is provided with a large closet, and a stationary wash stand with hot and cold water.

Each room is provided with two single cots or beds with mattresses and pillows, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The cost of rooms in the halls is \$13.50 per semester for each occupant, two in a room. This fee includes both light and heat. The room rent is payable in advance. The occupants will be expected to take care of their own room.

A student desiring room reserved for her must forward \$2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded after September first.

In connection with the dormitories, a large dining hall which will accommodate about four hundred people, is to be conducted hereafter not only for the young women who room here, but also for the benefit of other students, both young

women and young men, who room elsewhere. The cost of table board will thus be reduced to a minimum. During the past two years this has ranged from \$3.00 to \$3.50 a week. Owing to the unsettled conditions at the present time it is impossible to state what the cost of board will be during the next year. However, the dining hall will be conducted so as to provide wholesome fare at minimum cost. Young ladies living in the dormitories may have a limited amount of laundry done at a slight additional expense.

Payment for board in the dining hall must be made for four weeks in advance, and no deduction will be made for less than one week's absence.

**Student Labor.**—There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the College authorities to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college.

**Scholarships.**—The following articles from the law, defining the powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution. The student must present his appointment to the secretary of the College at the time of enrollment in order to obtain credit for the same.

### ENTRANCE REQUIREMENTS

**Admission.**—While students are admitted at any time and assigned to such classes as they are found best fitted to enter, it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters late he will not under any condition be allowed to hold a class back. See paragraph concerning tuition for statement concerning tardy enrollment fee. If a tardy beginning is imperative the student must arrange with a tutor for assistance in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

Candidates for admission to any department of the College must be at least fourteen years of age and of good moral character.

Credit in the College may be obtained by presenting certified grades from other institutions of reputable standing or through examination. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subject for which he has received credit.

The College will furnish prospective students with application blanks, which, after being filled out with certified standings and other data, should be returned to the registrar.

The first two days of the first semester are devoted to the registration of students. All students should complete their registration at this time and new students must present their credits at or before this time if they expect to be assigned a proper classification.

**Entrance Credits.**—For admission to the four-years courses leading to the degree of Bachelor of Science, and the two-years course in Pharmacy the student should present credit for fifteen units of high school or other secondary school work. A unit is a subject which is taught five periods a week



throughout the school year, or the equivalent of this work. Of the fifteen units required, some are prescribed, the remaining units being in optional subjects as indicated in the table below. A student who has graduated from a creditable high school course of four years will in general be enrolled as a member of the freshman class, but in case the prescribed subjects have not been completed, he may be required to bring up this back work.

A student may be admitted to a college class without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

For the benefit of students who are unable to attend a high school to complete the preparatory requirements, a preparatory course is maintained. Students will not be admitted to this department unless they present evidence that they have completed the work of the public schools as far as the ninth grade. For the preparatory course, see the Preparatory Department.

The list of prescribed and optional subjects are as follows:

### **Prescribed Units**

English, three units in advance of grammar. These should consist of composition work and a study of some of the simpler American and English classics.

Algebra, one and one-half units for engineering students, one unit for others. The fundamental operations, **factoring**, fractions, simple equations, involution, evolution, radicals, quadratic equations and the analysis and solutions of problems involving these principles.

Plane Geometry, one unit. The completion of plane geometry. Special emphasis should be paid to the solutions of



original problems and constructions. Students of engineering who have not completed solid geometry in the high school will be required to take the subject in the freshman year of the college course.

Elementary Physics, one unit. One year's work covering the science as presented in the best text books. Laboratory work should accompany the text book work.

History, one and one-half units. This work should follow, and not include, elementary United States History, and should be a connected study of some of the following lines: ancient, medieval, modern, English, American history.

Civics, one-half unit. A study of the constitutions of the United States and of the state, as presented in the best high schools.

Foreign Language, two units. These credits should be for two years' work in either German, French or Latin. In case a student is a graduate of a four-years high school course which does not include any foreign language, he may present other entrance credits in place of these two units, but must take foreign language in the freshman and sophomore years if such work is required in the course which he wishes to pursue.

### **Optional Units**

The three and one-half optional units may be offered in the same lines of work as the prescribed units and in other departments, as indicated by the table below. About the only requirement made concerning the work for which credit is offered is that it should be of a reasonably high standard. The maximum credit that is allowed in each subject is indicated in the table. While no minimum is stated it is expected that a student shall have covered a reasonable amount of a subject before being given any credit in it.

## TABLE OF ENTRANCE REQUIREMENTS

	Prescribed Units	Maximum Allowed
English .....	3	3
*Algebra, thru quadratics .....	1	2
Plane Geometry .....	1	1
Elementary Physics .....	1	1
History, following elementary U. S. History ....	1 ½	3
*Foreign Language, German, French or Latin..	2	4
Civics .....	½	½
Science—		
Agriculture .....		1
Physiology, following Biology, Zoology or		
Botany .....		½
Botany .....		1
General Biology .....		1
Zoology .....		1
Geology .....		½
Physical Geography .....		½
Bookkeeping .....		½
Commercial Geography .....		½
Freehand Drawing .....		½
Manual Training, including Mechanical Draw-		
ing .....		1
Cooking .....		½
Sewing .....		½
*Solid Geometry .....		½

\*See above for exceptions as to algebra, solid geometry and foreign language.

## STUDIES

**Credits.**—Credit for college work is counted in credit hours. A credit hour is one hour of class or lecture work requiring an additional hour and a half in preparation. Two and one-half hours in laboratory work is counted equivalent to one hour spent in the class room.

**Registration.**—In registering for work the student is advised by a member of the faculty who helps him to make out a consistent schedule of studies. In general, students are not

allowed to classify in more than twenty or less than fourteen credit hours a week. The faculty recognize that, because of differences in subjects and in the ability of students, some are able to carry a larger number of hours than others, and endeavor to assign to each student enough work to keep him reasonably busy without overloading him.

**Special Students.**—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

**Military Requirements.**—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students below the junior year are required to take military drill three times a week unless excused because of physical disability or for some other reason. Certificates of disability should be obtained from the physician whom the College authorities have designated for such work, the College bearing the expense of the examination.

According to the Federal law creating the Reserve Officers Training Corps, of which the College has accepted the provisions, juniors and seniors may elect military science during the remainder of their course, and thus receive their clothing and board from the National Government. For further regulations governing this work see the military department.

**Grades.**—All grades of students are reported to the registrar by means of the letters, M, S, E, I, P, and F. The letter **M** means that the student's work is of medium or average grade. The letter **S**, meaning superior, indicates that the work is above the average, but is not as high as **E**, which means that the student's work is excellent or so high above the average as to merit special mention. The letter **I** means inferior or below the average, but is higher than **P**, meaning passed, which indicates that the student has only a sufficient knowledge to make it unprofitable for him to repeat the subject. The letter **F** means that the student has failed to receive a passing grade.

**Conditioned Students.**—Any student who without good reason has failed to receive a passing grade in a reasonable amount of his work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

**Absences.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexcused absences as the faculty may deem proper. Should a student find it necessary to be late to his class he should make a satisfactory explanation to his instructor at the close of the period.

Extra credits will be required of students for absences from college duties, whether the absences are excused or not, unless the students are absent officially representing the College. While the faculty will do all that is reasonably possible to assist students to bring up work which has been missed because of sickness or for other good reasons, they recognize the principle that even a good excuse should not stand in lieu of scholarship.

## DEGREES AND CERTIFICATES

**Degrees.**—The courses of study leading to degrees given by the College are as follows:

The two years course in Pharmacy, leading to the degree of Pharmacy Graduate. For additional work of two years leading to the degree of Bachelor of Science, see schedule of Pharmacy Course.

The four-years course in Agriculture, in which the student may specialize along the lines of animal husbandry, dairy husbandry, agronomy, horticulture and plant pathology. Upon the completion of one of these schemes, under the direction of



the head of the department in which the group of electives is chosen, the student will receive the degree of Bachelor of Science.

The four-years course in Home Economics leading to the degree of Bachelor of Science.

The four-years courses in Mechanical, Electrical and Civil Engineering, leading to the degree of Bachelor of Science. In order to meet a constantly increasing demand for better equipped and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, Electrical Engineer or Civil Engineer, will be conferred. This work, which is nearly all prescribed, is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The four-years course in General Science, leading to the degree of Bachelor of Science. The work of this course is largely elective and is planned to give the student a liberal education, at the same time permitting specialization in the sciences.

The degree of Master of Science is offered to students who have received the Bachelor's degree either from this institution or from other institutions of equal rank, and who in addition have completed at least one full year's resident work, i. e., thirty-six credit hours, in advanced study and have shown a reasonable proficiency in such work. At least two-thirds of this work must be in some one line of study, called the major work. The scheme of study presented by the student for the degree must be prescribed by the faculty committee on advanced degrees, who will outline the work in consultation with the head of the department in which the major work is taken.

It should be understood that the work for this degree can not be subjected to rigid regulation, and that each case must be dealt with on its individual merits.

Owing to the great demand for county agricultural agents and extension workers the College will give instruction along



these lines to a limited number of graduates in Agriculture. Such persons should show some special fitness for the work they wish to take up. The instruction will consist of lectures on extension history, methods of conducting extension work, legislation, and other topics; the assisting of county agents and the carrying out of projects. The work will be varied according to the line that the student wishes to pursue. This work will be carried on in connection with the agricultural department of the College and may be applied towards completing the requirements for the degree of Master of Science.

**Special Courses.**—The College also offers special courses in several important and practical lines of work. These are mentioned in other parts of the catalog under the proper headings, and are as follows:

The four-years course in the School of Agriculture.

The one-year secretarial course.

The five-months course in steam engineering.

The three-months creamery course.

Courses in vocal and instrumental music.

Special work in art.

The farm and home course, for farmers and farmers' wives.

**Courses of Study.**—The courses leading to the degree of Bachelor of Science and the degree of Pharmacy Graduate are outlined on the following pages. The conditions for entrance to these courses may be found under "Entrance Requirements." A department will not be required to give an elective unless at least five students are enrolled in the subject.

## AGRICULTURAL COURSE

### Freshman Year

	Credits	
	1st Sem.	2nd Sem.
Rhetoric, English 9 & 10 .....	3	3
El. Chemistry, Chemistry 1 & 2 .....	4	4
Grain and Root Crops, Agronomy 1. ....	4	
Stock Judging, Animal Husbandry 1 .....	3	
Military Tactics .....	1	1
German 1 & 2, or French 1 & 2, or Spanish 1 & 2	4	4
Farm Dairying, Dairy Husbandry 1 .....		3
Breeds of Live Stock, Animal Husbandry 2 ....		3

Credits  
1st Sem. 2nd Sem.

### Sophomore Year

General Botany, Botany 2 & 3 .....	4	4
Quantitative Chemistry, Chemistry 3 .....		3
Veterinary Anatomy, Veterinary 1 .....		2
Military Tactics .....	1	1
German 3 & 4, or French 3 & 4, or Spanish 3 & 4	4	4
Organic Chemistry, Chemistry 11 .....	4	
General Entomology, Entomology 3 & 4 .....	2	3
General Horticulture, Horticulture 1 & 2 .....	1	1
English Literature, English 17 .....	3	

### ANIMAL HUSBANDRY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 .....	4	4
Psychology, Education 1 .....	3	
Extempore Speaking, Public Speaking 3 .....	2	
Animal Nutrition, Animal Husbandry 6 .....	3	
Soils, Agronomy 4 & 5 .....	4	4
Stock Feeding, Animal Husbandry 6 .....		3
Principles Animal Breeding, Animal Husbandry 4		3
Elective .....	2	4

#### Senior Year

Economics, History 15 .....	3	
Adv. Stock Judging, Animal Husbandry 3 .....	2	
Veterinary Hygiene & Sanitation, Veterinary 2	2	
Live Stock Production & Management, An. Husb. 7		4
Agricultural Chemistry, Chemistry 6 .....		3
Rural Economics, History 18 .....		3
Veterinary Medicine, Veterinary 3 .....		3
Elective .....	11	5

### DAIRY HUSBANDRY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 .....	4	4
Soils, Agronomy 4 & 5 .....	4	4
Inspection & Testing Dairy Products, Dy. Husb. 2	4	
General Bacteriology, Zoology 10 .....	4	
Extempore Speaking, Public Speaking 3 .....	2	
Dairy Bacteriology, Dairy Husbandry 3 .....		4
Dairy Technology, Dairy Husbandry 7 .....		4
Elective .....		2

Credits  
1st Sem.    2nd Sem.

### Senior Year

Factory Operation, Dairy Husbandry 4 & 5 . . . .	4	4
Dairy Management, Dairy Husbandry 6 . . . . .	3	
Economics, History 15 . . . . .	3	
Psychology, Education 1 . . . . .	3	
Principles Animal Breeding, An Husb. 4 . . . . .		3
Rural Economics, History 18 . . . . .		3
Elective . . . . .	5	9

### AGRONOMY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 . . . . .	4	4
Soils, Agronomy 4 & 5 . . . . .	4	4
Psychology, Education 1 . . . . .	3	
Crop Breeding, Agronomy 2 . . . . .		3
Field Management, Agronomy 3 . . . . .		2
Extempore Speaking, Public Speaking 3 . . . . .	2	
Elective . . . . .	5	6

#### Senior Year

Economics, History 15 . . . . .	3	
Geology, Agronomy 10 . . . . .	5	
Rural Economics, History 18 . . . . .		3
Heredity, Botany 10 . . . . .		3
Elective . . . . .	10	12

### HORTICULTURE & PLANT PATHOLOGY GROUP

#### Junior Year

General Zoology, Zoology 3 & 4 . . . . .	4	4
Soils, Agronomy 4 & 5 . . . . .	4	4
Extempore Speaking, Public Speaking 3 . . . . .	2	
Plant Pathology, Botany 5 . . . . .	4	
Plant Materials, Horticulture 8 . . . . .		1
Heredity, Botany 10 . . . . .		3
Systematic Pomology, Horticulture 5 . . . . .	2	
Plant Physiology, Botany 4 . . . . .		4
Elective . . . . .	3	3

#### Senior Year

Economics, History 15 . . . . .	3	
Psychology, Education 1 . . . . .	3	
Forestry, Horticulture 4 . . . . .	2	
Economic Entomology, Entomology 5 & 6 . . . .	3	3
Industrial Publicity, Commerce 15 . . . . .	2	

Credits  
1st Sem.    2nd Sem.

Architectural Drawing, Mech. Engineering 6 . . .	3	
Nursery Management, Horticulture 9 & 10 . . . .	4	4
Landscape Gardening, Horticulture 6 . . . . .		4
Rural Economics, History 18 . . . . .		3
Sociology, History 16 . . . . .		3
Experimental Horticulture, Horticulture 11 . .		2

### HOME ECONOMICS COURSE

#### Freshman Year

Rhetoric, English 9 & 10 . . . . .	3	3
Drawing, Art 14 & 15 . . . . .	2	2
Elementary Chemistry, Chemistry 1 & 2 . . . . .	4	4
French 1 & 2, or German 1 & 2, or Spanish 1 & 2	4	4
Household Physics, Physics 9 . . . . .	3	
Hygiene, Home Economics 3 . . . . .	1	
Plain Sewing, Home Economics 10 . . . . .	2	
Textiles, Home Economics 11 . . . . .		3
Food Preparation, Home Economics 4 . . . . .		3

#### Sophomore Year

English Literature, English 11 & 12 . . . . .	3	3
Organic Chemistry, Chemistry 11 . . . . .	4	
General Botany, Botany 2 & 3 . . . . .	4	4
French 3 & 4, or German 3 & 4, or Spanish 3 & 4	4	4
Dressmaking, Home Economics 12 . . . . .		3
Food Preparation, Home Economics 5 . . . . .	4	
Chemistry of Foods, Chemistry 4 . . . . .		4

#### Junior Year

Modern History, History 7 & 8 . . . . .	3	3
Bacteriology, Zoology 10 . . . . .	4	
General Zoology, Zoology 3 & 4 . . . . .	4	4
Psychology, Education 1 . . . . .	3	
Adv. Dressmaking, Home Economics 13 . . . . .	3	
English Literature, English 13 & 14 . . . . .	2	2
Dietetics, Home Economics 6 . . . . .		4
Applied Design, Art 4 & 5 . . . . .	2	2
Extempore Speaking, Public Speaking 3a . . . .		2
Elective . . . . .		3

#### Senior Year

Economics, History 15 . . . . .	3	
Art History, Art 6 & 7 . . . . .	2	2
Theory of Design, Art 3 . . . . .	2	
Home Nursing and Sanitation, Home Econ. 8 . .		3

	Credits	
	1st Sem.	2nd Sem.
Special Problems in Cookery, Home Econ. 7 ..	4	
*Theory of Teaching Home Economics, H. Econ. 14		3
Household Management, Home Economics 9 ..	3	
Sociology, History 16 .....		3
Elective .....	4	7

\*Required only of those who expect to teach Home Economics.

**MECHANICAL ENGINEERING****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 5 & 6 ...	2	2
Mechanical Drawing, Mechanical Engineering 5	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2
Plane Surveying, Civil Engineering 1 .....		2
Elementary Mechanics, Mathematics 16 .....		2

**Sophomore Year**

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	5	5
English Literature, English 17 & 18 .....	3	3
Machine Shop, Mechanical Engineering 4 .....	3	
Calculus, Mathematics 12 .....		5
Descriptive Geometry, Mechanical Engineering 7	2	
Machine Design, Mechanical Engineering 8 ....		3
General Astronomy, Mathematics 15 .....		3
Military Tactics .....	1	1

**Junior Year**

Machine Design, Mechanical Engineering 9 ....	2	
Elements of Mechanism, Mechanical Engineer. 10	3	
Electricity & Magnetism, Electrical Engineer. 1	4	
Hydraulics, Civil Engineering 5 .....	3	
Calculus & Analytic Mechanics, Mathematics 13 & 14 .....	5	3
Graphic Statics, Civil Engineering 3 .....	2	
Steam Engines & Thermodynamics, Mechanical Engineering 12 .....		5
Mechanics of Materials, Mechanical Engineer. 15		5

Note—Students expecting to teach should see Education Department.



Credits  
1st Sem. 2nd Sem.

Electrical Measurements, Electrical Engineer. 2	1	
Alternating Currents, Electrical Engineering 3	5	

**Senior Year**

Masonry & Foundations, Mech. Engineering 25	2	
Experimental Engineering, Mech. Eng. 16 & 17	3	4
Steam Boilers, Mech. Engineering 13	2	
Engineering Design, Mech. Engineering 19	4	
Highway Construction or Irrigation, Civil Engineering 4 or 11	2	
Economics, History 15	3	
Structural Design, Mech. Engineering 21		4
Contracts & Specifications, Civil Engineering 13		2
Reinforced Concrete, Civil Engineering 14		3
Gas & Oil Engines, Mech. Engineering 11		2
Elective	2	2

**ELECTRICAL ENGINEERING**

**Freshman Year**

Rhetoric, English 9 & 10	3	3
College Algebra, Mathematics 8	3	
Trigonometry, Mathematics 9 & 10	2	2
Elementary Mechanics, Mathematics 16		2
Elementary Chemistry, Chemistry 1 & 2	4	4
Extempore Speaking, Public Speaking 5 & 6	2	2
Mechanical Drawing, Mech. Engineering 5	3	
Military Tactics	1	1
Forging, Mechanical Engineering 2	1	
Machine Shop, Mech. Engineering 3		2
Plane Surveying, Civil Engineering 1		2

**Sophomore Year**

Analytic Geometry, Mathematics 11	5	
General Physics, Physics 3 & 4	5	5
English Literature, English 17 & 18	3	3
Machine Shop, Mech. Engineering 4	3	
Calculus, Mathematics 12		5
General Astronomy, Mathematics 15		3
Descriptive Geometry, Mech. Engineering 7	2	
Machine Design, Mechanical Engineering 8		3
Military Tactics	1	1

**Junior Year**

Electricity and Magnetism, Elec. Engineering 1	4	
Machine Design, Mech. Engineering 9	2	
Elements of Mechanism, Mech. Engineering 10	3	

	Credits	
	1st Sem.	2nd Sem.
Hydraulics, Civil Engineering 5 .....	3	
Calculus & Analytic Mechanics, Mathematics 13 & 14 .....	5	3
Graphic Statics, Civil Engineering 3 .....	2	
Electrical Measurements, Elec. Engineering 2 .....		1
Steam Engines & Thermodynamics, Mechanical Engineering 12 .....		5
Mechanics of Materials, Mech. Engineering 15..		5
Dynamo Electric Machinery, Elec. Engineer. 4		5

**Senior Year**

Alternating Currents, Elec. Engineering 5 ....	5	
Dynamo Design, Electrical Engineering 6 .....	3	
Masonry & Foundations, Mech. Engineering 25..	2	
Steam Boilers, Mech. Engineering 13 .....	2	
Experimental Engineering, Mech. Eng. 16 & 17	3	4
Economics, History 15 .....	3	
Electric Light & Power Distribution, Electrical Engineering 7 .....		5
Reinforced Concrete, Civil Engineering 14 ....		3
Contracts & Specifications, Civil Engineering 13		2
Gas & Oil Engines, Mechanical Engineering 11		2
Elective .....		2

**CIVIL ENGINEERING****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 5 & 6 ..	2	2
Mechanical Drawing, Mechanical Engineering 5	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2
Plane Surveying, Civil Engineering 1 .....		2
Elementary Mechanics, Mathematics 16 .....		2

**Sophomore Year**

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	5	5
English Literature, English 17 & 18 .....	3	3
Plane Topographical Surveying, Civil Eng. 2 ..	4	

Note—Students expecting to teach should see Education Department.

	Credits	
	1st Sem.	2nd Sem.
Military Tactics .....	1	1
Descriptive Geometry, Mechanical Engineering 7	2	
Calculus, Mathematics 12 .....		5
Machine Design, Mechanical Engineering 8 ....		3
General Astronomy, Mathematics 15 .....		3

### Junior Year

Calculus and Analytic Mechanics, Mathematics 13 & 14 .....	5	3
Electricity and Magnetism, Elec. Engineer. 1 ..	4	
Elements of Mechanism, Mech. Engineering 10	3	
Hydraulics, Civil Engineering 5 .....	3	
Graphic Statics, Civil Engineering 3 .....	2	
Highway Construction or Irrigation, Civil En- gineering 4 or 11 .....	2	
Steam Engines & Thermodynamics, Mech. Eng. 12		5
Mechanics of Materials, Mechanical Eng. 15 ..		5
Stresses, Civil Engineering 6 .....		4
Railroad Surveying or Sanitary Engineering, Civil Engineering 7 or 15 .....		3

### Senior Year

Economics, History 15 .....	3	
Geology, Agronomy 10 or		
Bacteriology, Zoology 10 .....	5 or 4	
Structural Details, Civil Engineering 8 .....	2	
Structural Steel Design, Civil Engineering 9 ..	3	
Masonry & Foundations, Mech. Engineering 25 .	2	
Experimental Engineering, Mech. Engineering 16 & 17 .....	3	4
Irrigation or Highway Construction, Civil En- gineering 11 or 4 .....	2	
Contracts and Specifications, Civil Engineer. 13		2
Bridges and Dams, Civil Engineering 12 .....		4
Reinforced Concrete, Civil Engineering 14 .....		3
Railroad Surveying or Sanitary Engineering, Civil Engineering 7 or 15 .....		3
Elective .....		2

### GENERAL SCIENCE COURSES

#### Freshman Year

Rhetoric, English 9 & 10 .....	3	3
Elementary Chemistry, Chemistry 1 & 2 .....	4	4

Credits  
1st Sem. 2nd Sem.

Trigonometry, Mathematics 9 and .....	2	
Plane Surveying, Civil Engineering 1 .....		2
or		
Principles of Cookery, Home Economics 3 and..	4	
Textiles and Sewing, Home Economics 11 .....		3
Electives from the following subjects to make 19 hours:		
Carpentry & Wood Turning, Mechanical En-		
gineering 1a & 1b .....	3	3
Forging, Mechanical Engineering 2 .....	2	
Mechanical Drawing, Mech. Engineering 5 ....	3	
Business Law, Commerce 9 .....	3	
Economic Geography, Commerce 13 .....		3
General Accounting, Commerce 11 .....	2	
Business Principles, Commerce 12 .....		2

**Sophomore Year**

English Literature, English 11 & 12 .....	3	3
Modern History, History 7 & 8 .....	3	3
French 3 & 4, German 3 & 4, or Spanish 3 & 4	4	4
*Military Tactics .....	1	1
Two of the following sciences:		
General Botany, Botany 2 & 3 .....	4	4
General Zoology, Zoology 3 & 4 .....	4	4
Quantitative Chemistry, Chemistry 3 .....		3
General Physics, Physics 3 & 4 .....	5	5
Analytic Geometry, Mathematics 11 .....	5	
Calculus, Mathematics 12 .....		5
Organic Chemistry, Chemistry 11 .....	4	
Volumetric Analysis, Pharmacy 9 .....		4

**Junior Year**

General Astronomy, Mathematics 15 .....		3
American Government, History 13 .....	3	
Psychology, Education 1 .....	3	
Extempore Speaking, Public Speaking 3 .....	2	
Political Parties, History 14 .....		3
Elective from Group 1 .....	3	3
Elective from Groups 1 & 2 .....	7	10

**Senior Year**

Economics, History 15 .....	3	
Geology, Agronomy 10 .....	5	
*Military Tactics .....	1	1
French 1 & 2, or German 1 & 2, or Spanish 1 & 2	4	4

\*Instead of Military Tactics young ladies should take Art 14 and 15 in the Freshman Year, and electives in the Sophomore Year.

Credits  
1st Sem. 2nd Sem.

Sociology, History 16 .....		3
Elective from Group 1 .....	3	3
Electives from Groups 1 & 2 .....	7	12

**Group One**

General Botany, Botany 2 & 3 .....	4	4
Economic Botany, Botany 12 .....	3	
Plant Pathology, Botany 5 .....	4	
Heredity, Botany 10 .....		3
Classification, Botany 7 .....	4	
Plant Histology, Botany 8 & 9 .....	4	4
Quantitative Chemistry, Chemistry 3 .....		3
Household Chemistry, Chemistry 8 .....	4	
Agricultural and Sanitary Analysis, Chemistry 5	4	
Chemistry of Foods, Chemistry 4 .....		4
Industrial Chemistry, Chemistry 7 .....	3	
Agricultural Chemistry, Chemistry 6 .....		3
Organic Chemistry, Chemistry 10 & 11 .....	5	5
Volumetric Analysis and Drug Assaying, Pharmacy 9 .....		4
General Physics, Physics 3 & 4 .....	5	5
Advanced Physics, Physics 5 & 6 .....	4	4
Heat, Physics 7 .....	4	
Light, Physics 8 .....		4
General Entomology, Entomology 3 & 4 .....	2	3
Economic Entomology, Entomology 5 & 6 ....	3	3
Systematic Entomology, Entomology 7 & 8 ...	2	2
Household Pests, Entomology 9 .....		3
Medical and Veterinary Entomology, Entom. 10	2	
Nature Study, Entomology 12 .....	3	
Bird Study, Entomology 11 .....		2
Animal Behavior, Entomology 13 .....	2	
Beekeeping, Entomology 14 .....	3	
General Zoology, Zoology 3 & 4 .....	4	4
Histology, Zoology 7 & 8 .....	4	4
Bacteriology, Zoology 10 .....	4	
Embryology, Zoology 9 .....	3	
Comparative Anatomy of Vertebrates, Zoology 12		3
Analytic Geometry, Mathematics 11 .....	5	
Calculus, Mathematics 12 .....		5
Calculus and Analytic Mechanics, Mathematics 13	5	
Analytic Mechanics, Mathematics 14 .....		3



Credits  
1st Sem. 2nd Sem.

Plane and Spherical Trigonometry, Mathematic		
9 & 10 .....	2	2
Meteorology, Agronomy 11 .....		3

**Group Two**

French, French 5 & 6 .....	3	3
German, German 5 & 6 .....	3	3
English Literature, English 13 & 14 .....	3	3
English Literature, English 15 & 16 .....	3	3
The English Novel, English 19 & 20 .....	3	3
Rural Sociology, History 17 .....	2	
American History, History 9 & 10 .....	3	3

**ELECTIVES IN JUNIOR AND SENIOR YEARS IN  
GENERAL SCIENCE (Continued)**

Rural Economics, History 18 .....	2	
Theory of Design, Art 3 .....		1
Applied Design, Art 4 & 5 .....	2	2
Art History, Art 6 & 7 .....	2	2
Theory & Interpretation of Musical Forms		
Music 6 .....	2	
History of Music, Music 7 .....	3	
Harmony .....	3	3
Business Law, Commerce 9 .....	3	
Money & Banking, Commerce 10 .....		3
Economic Geography, Commerce 13 .....	3	3
General Accounting, Commerce 11 .....	3	
Business Principles, Commerce 12 .....		2
Literary Interpretation, Public Speaking 1 & 2	3	3
Extempore Speaking, Public Speaking 3 & 4		
or 5 & 6 .....	2	2
Argumentation and Debate, Public Speaking 7	3	
Public Address, Public Speaking 9 & 10 .....	2	2
Elementary Public Speaking, Public Speaking		
11 & 12 .....	4	4
The Speech for Special Occasions, Public		
Speaking 8 .....		3
Carpentry and Wood Turning, Mechanical En-		
gineering 1a & 1b .....	3	3
Forging, Mechanical Engineering 2 .....	2	
Mechanical Drawing, Mechanical Engineering 5	3	
Educational Psychology, Education 2 .....		3
History of Education, Education 3 .....	3	
School Administration, Education 5 .....		3
Principles of Teaching, Education 4 .....		3

	Credits	
	1st Sem.	2nd Sem.
Educational Measurements, Education 7 .....	3	
Educational Sociology, Education 6 .....		3
Supervision & Practice Teaching, Education 8	4	4
Psychology, Education 1 .....	3	

## TWO YEARS COURSE IN PHARMACY

### First Year

Elementary Chemistry, Chemistry 1 & 2 .....	4	4
General Botany, Botany 2 & 3 .....	4	4
Anatomical Methods, Zoology 5 & 6 .....	4	4
Pharmacy Latin, Pharmacy 1 .....	3	
Military Tactics .....	1	1
Pharmacognosy, Botany 11 .....		4
Pharmaceutical Problems, Pharmacy 6 .....	2	

### Second Year

Materia Medica, Pharmacy 2 & 3 .....	5	5
Pharmacy 4 & 7 .....	5	5
Pharmacy Laboratory, Pharmacy 5 & 8 .....	3	4
Organic Chemistry, Chemistry 11 .....	4	
Volumetric Analysis, Pharmacy 9 .....		4
Military Tactics .....	1	1

NOTE—Students who have received the degree of Pharmacy Graduate may receive the degree of Bachelor of Science upon completing sufficient work in addition to the two-years course to make one hundred and forty-four hours of credit.

Of the additional work the following courses are required:

Rhetoric .....	6 hours
English Literature .....	6 hours
History .....	6 hours
Modern Language .....	16 hours

The remaining work to be elected in physics, chemistry, botany, bacteriology, zoology, or histology. Students electing physics should take trigonometry.

# Department of Instruction

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## ANIMAL HUSBANDRY

**Professor Wilson; Associate Professor Thompson; Mr. Cramer.**

It is generally admitted that livestock farming is the basis for an intensive agriculture and that it, as well as good farming, must be practiced if the fertility of the soil is to be maintained.

Work in this department gives the student a practical and scientific knowledge of animal husbandry as applied to South Dakota conditions. The College herds and flocks include representatives of eighteen of the leading breeds of domestic animals. These are all used for class and demonstration purposes. Men having completed this course are well equipped to manage livestock farms and to judge stock shows and to teach.

The following subjects are offered by this department:

1. **Stock Judging.**—Three credits; first semester. Study and practice in judging of horses, cattle, sheep and swine. Special attention is given to the use of score cards both for market and breeding animals.

2. **Breeds of Live Stock.**—Three credits; second semester. A study of the various breeds, their origin, development, characteristics and adaptability as to use and locality; work accomplished by the noted breeders of the past and present day review.

Text: Plumb's Types and Breeds of Farm Animals.

3. **Advanced Stock Judging.**—Two credits; first semester; prerequisite, Animal Husbandry 1 and 2.

Particular attention is given to the placing of animals and the giving of reasons why they are so placed. This course includes the judging of market, breeding and show animals.

4. **Principles of Animal Breeding.**—Three credits; second semester; prerequisite, Animal Husbandry 2. This course deals with the laws that govern reproduction and the development of animals, and the different systems employed in producing both market and breeding animals; study of blood lines and pedigrees.

Text: Davenport's Principles of Breeding.

5. **Animal Nutrition.**—Three credits; first semester; prereq-

uisite, Animal Husbandry 1 and 2, and Chemistry 2. This subject deals with the physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations.

6. **Stock Feeding.**—Three credits; second semester; prerequisite, Animal Husbandry 5. A study of the feeding of the various classes of live stock, compounding of balanced rations, results of experimental and practical feeding investigations.

Text: Henry's Feeds and Feeding.

7. **Live Stock Production and Management.**—Four credits; second semester; prerequisites, Animal Husbandry, 1, 2, and 6. This course will consist of lectures pertaining to the proper locations for live stock farms, the kind and arrangement of buildings, founding and management of herds and flocks, capital required, methods of selling, etc.

8. **Poultry Culture.**—Two credits; first semester. A general course dealing with housing, yarding, marketing and the care of breeding and growing poultry.

9. **Poultry Feeding.**—One credit; first semester. This course should be preceded or accompanied by Poultry Culture. A course dealing with the feeding of breeding flocks; laying flocks; fattening for market and home use, and a general discussion of feeds as adapted to poultry.

10. **Poultry Breeding.**—Two credits; second semester. This course should be preceded or accompanied by Poultry Culture. A study of the mating systems used in producing show and utility birds; the mechanism, operation and management of incubators and brooders.

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## VETERINARY MEDICINE

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Dr. Lipp

The prevention of animal disease by the adoption of better animal hygiene, sanitation, and care is receiving more attention today than ever before. The reason for this is due to a fuller knowledge of the best methods of applying these measures to the prevention of disease, and to the rapidly increasing desire on the part of stock raisers and others for preventive measures. Even with the most modern methods of treatment, it is truer today than ever before, that preventing animal disease is more desirable and less expensive than treating it. The rapidly increasing value of live stock together with the danger of introducing and spreading disease by the

more complex systems of live stock raising and transportation, have increased the rapidity with which diseases spread over wide areas. Thru the necessity for protecting his own interests, the farmer of today is paying more attention to these matters. Indeed the agricultural college that does not give courses that enable its students to act intelligently and in co-operation with the local and state authorities for the prevention and control of animal diseases, fails to fulfill its duty to the state and nation.

All the courses offered by the Veterinary Department have been planned to give students the training that will assist them in the prevention of diseases common in this state. No attempt is made to teach students to diagnose or treat any of the more serious diseases, but rather to recognize their seriousness early and secure the services of trained veterinarians. Treatment, however, is only for those diseases that yield to the action of simple remedies. Every effort is made to have students realize the value of competent veterinary service. They are urged to secure it early and thereby increase the chances for early and complete recovery.

1. **Veterinary Anatomy.**—Two credits; second semester. This course gives students a knowledge of the structure of the front limb of the horse, and the care needed to maintain it in a healthy condition, and fit for the highest service. The lectures consist of a brief study of the anatomy of the front limb, and a more detailed study of the structure of the horse's foot. Especial emphasis is placed on the prevention of diseases of the foot.

2. **Veterinary Hygiene and Sanitation.**—Two credits; first semester. This course includes a study of the animals' needs of ventilation, and the best systems of ventilation. Stable lighting, the barn yard, feed lot, and in fact all parts of the barn and its surroundings are considered in their relation to animal health and the prevention of disease.

3. **Veterinary Medicine.**—Three credits; second semester. This course deals with the cause, spread, and control of the common infectious and contagious diseases of farm animals. No attempt is made to develop proficiency in diagnosis, but rather to understand the methods by which these diseases spread, and to teach the student to co-operate intelligently with local and state authorities for their control and eradication.

4. **Common Diseases.**—Two credits; first semester. This course includes a study of many of the commoner diseases, their causes and



prevention. Simple treatment and methods of handling are studied in connection with those diseases that can be easily diagnosed, and that yield readily to proper care.

5. **Veterinary Physiology.**—Three credits; second semester. This course includes a study of the processes of digestion and assimilation in horses and cattle. Food is traced from the mouth thru the various digestive processes to the tissues of the body. The use of food within the tissues and the production of waste are then studied, and finally the excretions and their composition.

### DAIRY HUSBANDRY

**Professor Larsen; Assistant Professor Jones; Mr. Hungerford;  
Mr. Eldridge; Mr. Lynch**

This department offers two separate courses: (1) The four-years agriculture course, the last one and one half years of which are devoted chiefly to special dairy studies. (2) The three-months dairy course.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become successful operators of creameries, cheese factories, central plants and dairy farms.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery in which butter, cheese and ice cream are manufactured throughout the year. The department occupies a two-story brick building. On the first floor are the engine room, creamery rooms with full equipment for butter, cheese and ice cream making, refrigerating rooms, locker and reading room, and a large laboratory used for instructional purposes. On the second floor are located class rooms, offices, dairy bacteriology laboratory, and chemistry research laboratory.

The dairy herd, which consists of representatives of the principal dairy breeds, affords an excellent opportunity to become acquainted with dairy types. The dairy barn is large and well equipped. Milking machines are in daily use, thus affording students opportunity to acquire practical knowledge regarding machine milking.

Experiments relating to feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments, note manner of outlining and executing investigational work, and profit from results. Advanced worthy students may arrange to assist in some of this work.

The following work is offered.

1. **Farm Dairying.**—Three credits; second semester. A study of the economic production, relation of form of dairy cow to production, secretion and composition of milk; of the comparative economy in disposing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germs and degree of purity of dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. **Inspection and Testing of Dairy Products.**—Four credits; first semester.

Those taking this course should have at least one term's work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

3. **Dairy Bacteriology.**—Four credits; second semester.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, cheese, and ice cream. General bacteriology is a prerequisite study.

4. **Factory Operation (Creamery.)**—Four credits; first semester; prerequisite, Dairy 2.

A thorough study is made in receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given

to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

**5. Factory Operation (Cheese).—**Four credits; second semester.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheeses, including the principles involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.

**6. Dairy Management.—**Three credits; first semester. The various methods of improving and upbuilding a dairy herd, and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptibility of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody a study of the extent to which dairy farming is practiced and under what conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

**7. Dairy Technology.—**Four credits; second semester; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

**8. Dairy Research.—**Second semester. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

**9. Dairy Practice.—**The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

**10. Domestic Dairying.—**Two credits; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adulteration of milk and dairy products, modification of milk, the use of the Babcock

test for fat, effects of different ferments on milk and dairy products, and the making and judging of cheese and butter will be demonstrated in the college creamery laboratory.

**11. Advanced Inspection of Dairy Products.**—Four credits; first semester; prerequisite, Dairy 2, Chemistry 3.

This course takes up a study of the properties of the component parts of milk and its products including abnormal milk, condensed and powdered milks, butter from neutralized cream, oleomargarine and leading types of cheese.

**12. Advanced Dairy Bacteriology.**—Four credits; first semester; prerequisite, General Bacteriology and Dairy 3; elective. This course is a continuation of Dairy Bacteriology (Course 3.) It includes a study of isolation of the bacteria of special importance in the dairy industry, such as: thorough acquaintance of characteristics of the bacteria that produce undesirable fermentations, bitter milk, slimy milk, gargety milk, gassy cheese and condensed milk, rancid butter, etc.—and pathogenic organisms especially important in connection with market milk supply. It also includes the study of the desirable bacteria, such as: lactic acid producing organisms, those that produce desirable flavors in dairy products and the pure cultures widely used in connection with fermented milk drinks.

**13. Dairy Extension.**—Four credits; first semester, prerequisite, Dairy 1, 2, and 6; elective. This study emphasizes chiefly the subjects applied in different methods employed in the co-operative improvement of dairy cattle, co-operative building of silos, formation of cow testing associations and methods of keeping the various records, the making of official records with cows belonging to the various breeds, and the formation of co-operative creameries and co-operative marketing of dairy cattle and dairy products.

## AGRONOMY

Professor Hume; Associate Professor Hutton; Assistant Professor Champlin; Mr. Loomis; Mr. Fowlds;  
Mr. Rilling.

The Agronomy Department is the department of soils and crops. To help students apply the principles of science to crop production on the farms of South Dakota is the essential purpose of the courses offered.

What is soil in South Dakota, or on some farm within the state? The student may learn to outline soil areas, to analyze soils, to observe field experiments, and answer the question for himself.

What crops will grow on South Dakota soil areas, and how may the growing of them be made most profitable to the man



who does the work? A study of the results of experiments will answer the questions for the student. It is attempted to give the student in agronomy that accurate knowledge of conditions which is necessary to success in farming.

The courses offered are fundamental, practical, scientific. They are designed for South Dakota farmers. They may be pursued with profit by prospective teachers of agriculture, or experiment station workers.

1. **Grain and Root Crops.**—Four credits; first semester. Production and marketing of the common field crops including barley, corn, flax, oats, potatoes, rye, and wheat etc. Classification, judging, and grading of seed. Open to all college students. Required of all agronomy students.

2. **Crop Breeding.**—Three credits; second semester. A discussion of the principles of cropping with emphasis laid upon improvement by selection, and breeding. Dealing chiefly with principal field crops of South Dakota,—corn, wheat, oats, barley, potatoes, alfalfa. In addition to text book references, current articles will be reviewed from such magazines as *The Journal of American Society of Agronomy*, *Science*, *The Journal of Heredity*. Students of this course may be requested to subscribe for at least one such magazine. Required of all agronomy students.

3. **Field Management.**—Two credits; second semester, prerequisite, Agronomy 1. Arrangement and management of crop rotations with special reference to cost and profit under South Dakota conditions. Required of all agronomy students.

4. **Forage Crops.**—Four credits; second semester. Production and marketing of field crops including meadow and pasture grasses, millets, prosos, sorghums, hemp, clovers, field peas, field beans, soy beans, etc. Open to all college students.

5. **Seed Inspection.**—Two credits; second semester. Seed testing, seed impurities and method of eradication of weeds from farm crops and seeds, studies of the characteristics of crop impurities from the standpoint of eradication, such as quack grass, Canadian thistle and wild oats.

6. **Field Crops.**—Elective. Four to eight credits; prerequisite, Agronomy 2. Special problems for advanced students. The advanced student may become interested in some particular line of investigation, as crops for forage, a problem in corn breeding, the effect of storing of seed of corn or other crops upon germination and growth, the effect of various methods of cultivation, and problems of crop improvement. Such work may imply a study of previous experiments, cropping experiments in green house or on the field. The student may be required to submit a final report or



thesis. Time and number of hours to be arranged with instructor in charge.

7. **Crop Inspection.**—Two credits; second semester. Advanced grain judging, examination of the several varieties of cereals, root and forage crops, with especial reference to resistance to adverse weather conditions and diseases, examination of crops in the field, experiment plots and prepared specimens.

8. **Soil Physics and Management.**—Four credits; first semester; prerequisites, Physics 1 and 2, Chemistry 1, 2, and 3. This course deals with the origin and development of the soil under different climatic conditions; classification of soils upon several bases; texture, porosity, specific gravity, plasticity, capillarity, granulation of soils; the soil as a reservoir for water; the movement and control of soil water; irrigation and drainage; the alkali problem; aeration of the soil, its relation to soil texture and plant growth; soil temperature; the physical effect of manures upon the soil; soil erosion by wind and running water—blowing and washing—and their control; the practical application of the foregoing to methods of tillage; crop rotations and the application of green and farm manures in the management of different types of soil. The laboratory work includes a careful study of the physical properties of the soil through observation and practice; soils are also studied under field and green house conditions.

9. **Soil Fertility.**—Four credits; second semester; prerequisite, Agronomy 1 and 8, and Chemistry 11. The relation of the fertility content of the soil to crop yields; effect of supplying various elements of fertility; effects of different rotations and system of farming in relation to permanent agriculture; a study of a system of agriculture in relation to permanent agriculture; a study of a system of agriculture adapted to South Dakota conditions. The laboratory work includes the analysis of manures and fertilizers and the determination of their agricultural and commercial values; the analysis of various farm products; the analysis of a soil, preferably from the student's home farm, to determine the fertility content. These analyses serve as the basis for devising a system of permanent agriculture for the student's home farm.

10. **Advanced Soil Physics.**—Four credits; first semester; prerequisite, Agronomy 9. This course is designed for those students who wish to continue the work in Soil Physics begun in Agronomy 8. A study in the field of the effects of discing, harrowing, rolling, sub-soiling, frequency and depth of cultivation with reference to conservation of soil moisture. The student may select a soil in which he is interested and make a complete physical analysis thereof; he may make a careful study of the movement of the water therein and its effect upon the growth of plants; he may choose a special irrigation or drainage problem in which he is interested; the results of the work are summarized in a final report or thesis. Stu-

dents who elect this course are advised to signify their intention of so doing at the end of the college year, so that materials may be collected during the summer, and observations reported.

**11. Advanced Soil Fertility.**—Four credits; second semester; prerequisite, Agronomy 9. This course is a continuation of Agronomy 9 and permits the student to study in detail a special soil in which he may be interested or to pursue a special problem. The work may include pot culture work in the green house; analysis of the soil used in the pots; application of various fertility elements and their relation to the management of the soil; the study of the micro-organisms of the soil in relation to the preparation and availability of plant food, preparation of culture media, cultures from soil suspensions, preparation and study of a few pure cultures, ammonification, nitrification, nitrogen fixation, legume bacteria and conditions favorable to their growth, inoculation; results of bacterial action determined by quantitative analysis; reading of bulletins, books, etc., and the preparation of a bibliography. The results of the study will be submitted in a final report or thesis.

**12. Irrigation and Drainage.**—Two credits; second semester. A consideration of the effects of the change in water contents of soils through irrigation and drainage; the effect upon the physical condition of the soil and upon its productivity, special attention given to the problems of irrigation and drainage of unreclaimed lands in South Dakota. Lectures, reading, field observations.

**13. Earth Science; Geology.**—Five credits; first semester. A course in general geology with the greater emphasis placed upon the physical division of the subject. The geology of South Dakota in relation to soils, water supplies and mineral wealth is given special attention. Collections of rocks, minerals, typical fossils, physiographic and geologic models, lantern slides, charts and maps are available for laboratory work and reference.

**14. Earth Science; Meteorology.**—Three to five credits; second semester. A practical course dealing with the laws controlling the movements of the atmosphere, the study of climatological and weather factors, with special attention to conditions in the United States, the climate and weather of South Dakota in relation to her various economic interests, weather maps and forecasts.

**15. Feed Crops.**—A course of lectures on crop production from the standpoint of feeding, offered to the short course students in dairying at the request of the Dairy Husbandry Department.

**Graduate Courses.**—A limited number of courses of study may be arranged for students who have already received the Bachelor's Degree and who desire to pursue some line of investigational work. Such students should consult with the professor in charge. Problems relating to systems of farming and soil fertility, mechanical composition of soils, drainage water, variation in type as related to crop

yields, influence of selection and breeding upon yield of special crops may be included in a list of possible studies for graduates.

## HORTICULTURE AND FORESTRY

Professor Hansen; Mr. Stoltenberg.

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are offered by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit, plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for the general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

Special stress is placed upon practical work in the grafting room.

The following work is offered:

1, 2. **General Horticulture.**—One credit each semester. An

introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

3. **Floriculture and Market Gardening.**—Two credits; second semester.

The commercial and amateur cultivation of flowers and vegetables under glass and in open air; lectures, demonstrations, and text book work.

4. **Forestry.**—Two credits; first semester. Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees. Lectures and demonstrations.

Texts: Pinchot's *Primer of Forestry*; Cheyney's *The Farm Woodlot*; Green's *Forestry in Minnesota*; *Proceedings of the American Forestry Congress*.

5. **Systematic Pomology.**—Two credits; first semester. Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits.

Texts: *American Horticultural Manual*, Bailey's *Principles of Fruit Culture*, many bulletins and reports.

6. **Landscape Gardening.**—Four credits; second semester. The philosophy of the beautiful in its various modes of expression; gardening as one of the fine arts; historic developments of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds. Lectures; many text books and references.

7. **Heredity.**—Three credits; second semester. This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to society; recent theories and work in plant-breeding.

Texts: Darwin's *Animals and Plants under Domestication*; DeVries' *Species and Varieties, their Origin by Mutation*; Bailey's *Plant-Breeding and Survival of the Unlike*; *Reports of International Conferences on Genetics*; *Reports of the U. S. Department of Agriculture*.



8. **Plant Materials.**—One credit; second semester. A field and laboratory study of the trees, plants, shrubs and flowers used in Landscape Gardening.

9-10. **Nursery and Greenhouse Management.**—Four credits each semester. A field and laboratory study of nursery and greenhouse operations throughout the school year. Carefully written reports are prepared. This is supplemented by the required practical work outside of the school year.

11. **Experimental Horticulture.**—Two credits; second semester; prerequisite, courses 1-8. A survey of some of the chief problems. An effort is made to develop the spirit of initiative and originality in research work.

### HOME ECONOMICS

Professor Ward; Miss Leaton; Miss Swift; Miss Erwin;  
Miss Siglinger.

The purpose of this department is to provide training along the lines of intelligent house-keeping, and home-making. The location of the work is the entire third floor of the North Building. The rooms consist of a large cooking laboratory, a dining room, a sewing room, and a recitation room provided with the equipment necessary for carrying on the work. Through the general library, opportunity is given for the use of the newest and best literature relating to the subject.

The work offered is intended to impart knowledge, develop skill in execution, stimulate self-direction and broaden and strengthen the individual. A good foundation of pure science is laid for all applied science in the cooking and sanitation courses while the household arts give opportunity for artistic expression, the principles of which are gained through the regular art training.

For those who wish to teach Home Economics training is also given through carefully supervised practice teaching and the special methods course in addition to required work in the department of education.

The general subjects of the department are as follows:

For Home Economics 1 and 2, see the preparatory department.

3. **Hygiene.**—One credit; first semester. This course includes a general study of hygiene of the person, clothing and surroundings with consideration of social and ethical questions.

4. **Food Preparation.**—Three credits; second semester. The text book work covers the study of food source and manufacture.



In laboratory work special emphasis is placed upon the principles and technique of cooking. The aim of the course is to develop skill in cooking, and an independence of recipes through an understanding of basic principles.

Text and reference work required.

5. **Food Preparation.**—Four credits; first semester. Prerequisite, Home Economics, 4. The work covers a study of food composition and value. In laboratory work special emphasis is placed upon the cost and serving of food. Practice is given in serving meals, buffet and cafeteria luncheons.

Text and reference work required.

6. **Serving and Dietetics.**—Four credits; second semester; prerequisites, Home Economics 4 and 5, Organic Chemistry and Physiology. The course consists of a study of the fundamental principles of human nutrition, and the application of these principles under varying conditions and laboratory work in the planning, preparation and serving of dietaries for normal individuals of various ages, and under varying economic and social conditions.

7. **Special Problems in Cookery.**—Three credits; first semester; prerequisites, the first three years of the Home Economics course or equivalent. This course is planned to offer opportunity for advanced and original work in cooking, and the study of foods. Special problems are studied by individuals or in group, and results reported.

Reference work required.

8. **Home Nursing and Sanitation.**—Three credits; second semester; prerequisites, Home Economics 3, 4 and 5. The work includes a study of the general care of the sick; directions for emergencies, consideration of home, and community problems in sanitation.

Text and reference work required.

9. **Household Management.**—Three credits; first semester; prerequisites, Physics 9, Home Economics 4 and 5. The work includes a study of the planning and general care of the house and furnishings; cost, and use of labor saving devices; purchase, and care of food; marketing conditions; pure food laws; budgets and household accounts.

Reference and laboratory work required.

10. **Plain Sewing.**—Five credits; first semester. The work consists of a study of the stitches and their application on small articles; the use of commercial patterns; the use and application of the sewing machine in the making of plain undergarments, and a simple waist.

11. **Textiles.**—Three credits; second semester. The work includes a study of the principal textile fibres; the selection of clothing and the making of clothing budgets.

Text and reference work required.

12. **Dressmaking.**—Three credits; second semester; prerequisites, Home Economics 11 and 12. The work includes the cutting and fitting of a light weight woolen dress; remodeling of a dress and making a fancy waist or a substitute.

13. **Advanced Dressmaking.**—Three credits; first semester; prerequisites, Home Economics 11, 12, 13. The course consists of practice in designing costumes; the use of the dress form, and construction of an evening gown. Supplementary work to be added.

14. **Theory of Teaching Home Economics.**—Three credits; second semester; prerequisites, three years work in the Home Economics course. The course is planned to study the educational background and to give a summary and review of the entire field of Home Economics. This is done by planning the content of courses, reviewing text books, writing lesson plans, and discussing methods of teaching.

15. **Millinery.**—Two credits; second semester. Elective, open only to seniors.

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## MECHANICAL ENGINEERING

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**Professor Solberg; Professor Cook; Assistant Professor Bonell;  
Mr. Welch.**

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the classroom is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments.

The department is located in the Engineering Building.

The workshops are supplied with a large variety and quantity of tools. They are furnished with twenty-five sets of carpenter tools and eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50-horse power steam engine.

The Experimental Engineering Laboratory is equipped with a 100,000 pound vertical screw testing machine, for making tensile and compressive tests of the various materials of construction; an automatic shot cement briquette-testing machine; a gas engine; a 10 by 10 steam engine; an 8 by 10 steam engine; a 5 by 7 steam engine; and there are also available for this work a 12 by 14 steam engine and two 48 by 16 horizontal tubular boilers. A calorimeter for determining the heat values of gases; a calorimeter for making British thermal unit tests of coal, and an apparatus for flue gas analysis are also used in this work.

The laboratory also possesses a large amount of small apparatus such as indicators, planimeters, steam gauges, thermometers, etc., and a complete outfit for making tests of sand, cement and concrete.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered.

1a. **Carpentry and Wood Turning.**—Three credits; first semester. Demonstration and work in the care and use of wood working tools. Talks on design of furniture, cabinets and frames. Practice at the bench in the working of a variety of woods and finishes. Work in framing or building construction. The study of manual training outlines.

1b. **Carpentry and Wood Turning.**—Three credits; second semester; continuation of Course 1a.

2. **Forging.**—Two credits; first semester. Demonstration and work in the care and use of the fire and forging tools together with the work in iron, mild steel and tool steel. The class work will include work in bending, drawing out, upsetting, shaping and tempering of tools, and art smithing. The course will offer a good outline in metal work for manual training.

3. **Machine Shop.**—Two credits; second semester. Includes a study of the materials used in machine work; shop sketching; methods of laying out work; exercises in pipe fitting, chipping; filing, scraping, belt lacing, shaft aligning, babbiting, riveting, soldering, hand and ratchet drilling; and the elementary principles of machine work.

4. **Machine Shop.**—Three credits; first semester. A study of the principles and methods of machine work; problems involving the use of the various machine tools, as the lathe, planer, shaper, milling machine, drill grinder, drill press, etc. Regular text book and class work supplements the actual work in the shop during both semesters of machine shop. Prerequisite, Machine Shop 3.

5. **Mechanical Drawing.**—Three credits; first semester. Instrumental, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. **Architectural Drawing.**—Two credits; first or second semester. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. **Architectural Design.**—Two credits; first semester. Principles of planning introduced in practical problems, exercises in composition and details.

6b. **Perspective.**—Three credits; first or second semester.

7. **Descriptive Geometry.**—Two credits; first semester; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. **Machine Design.**—Three credits; second semester. Solution of various problems involving the design of simple parts of the machine.

9. **Machine Design.**—Two credits; first semester. Continuation of Mechanical Engineering 8.

10. **Elements of Mechanism.**—Three credits; first semester. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. **Gas Engines and Gas Producers.**—Two credits; second semester; prerequisite, Thermodynamics. Study of the theory, design



and operation of gas, gasoline and oil engines and of the various types of gas producers.

**12. Steam Engines and Thermodynamics.**—Five credits; second semester; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

**13. Steam Boilers.**—Two credits; first semester; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

**14. Kinematics.**—Two credits; second semester. Geometry of machinery, problems in the design of motion transmitting appliances.

**15. Mechanics of Materials.**—Four credits; second semester; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of the materials of construction and the behavior of and characteristics displayed by these materials when put under stress. Text: Merriam's Mechanics of Materials.

**16. Experimental Engineering.**—Three credits; first semester; prerequisite, Mechanics of Materials. Testing of materials of construction including investigation of problems in connection with use of concrete.

**17. Experimental Engineering.**—Four credits; second semester. Includes testing of gauges, thermometers, planimeters; determination of heat value of coal; use of steam and gas engine indicators, throttling and separating calorimeters, dynamometers and Prony brakes; and complete efficiency tests of engines and boilers under actual running conditions. It is the endeavor in this work to make the student familiar with the construction and operation of steam engines, steam boilers, gas engines and the many attachments and auxiliaries necessary for their efficient operation.

**18. Experimental Engineering.**—Three credits; second semester. Includes the problems and investigations embraced in Experimental Engineering 18 which are of particular importance to the Civil Engineer.

**19. Engineering Design.**—Four credits; first semester. Solution in the drawing room of some practical problems in design and making working drawings of same.

**20. Engineering Design.**—Four credits; second semester. Continuation of Mechanical Engineering 21.



21. **Structural Design.**—Two credits; first semester. Design of roofs and buildings for power stations. For students in mechanical and electrical engineering.

22. **Structural Engineering.**—Two credits; second semester. Continuation of Mechanical Engineering 23, with special reference to results obtained from Mechanical Engineering 19.

23. **Statics.**—Two credits; first semester. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

24. **Heating and Ventilation.**—Two credits; second semester. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

25. **Masonry and Foundations.**—Two credits; first semester. A study of cement, concrete and building stone with special reference to their use in walls and foundations; bearing power of soils; design and construction of foundations of various kinds.

26. **Special Problems in Experimental Engineering.**—Two credits; second semester; open to senior engineering students upon approval of head of their department.

27. **Concrete Construction.**—Two credits; first and second semesters; elective; open to junior or senior students in general science and agricultural courses. Will include practical problems in the use of concrete and the testing of concrete materials.

28-29. **Thesis Work.**—Two or three credits each semester. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

**ELECTRICAL ENGINEERING**

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**Professor Brackett**

The purpose of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both direct and alternating current types, transformers and measuring instruments of different types and classes for recording and measuring currents, pressures and speeds. A sixty-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered.

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1. **Electricity and Magnetism.**—Four credits; first semester; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the principles of the electric and magnetic circuits, electro-magnetic induction, self-induction and capacity, also direct current dynamos and motors and their uses under ordinary service conditions.

2. **Electrical Measurements.**—One credit; second semester; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive

galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Alternating Currents.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurements of inductance and capacity, wave form of pressure and current, tests of machines and transformers.

4. **Dynamo Electric Machinery.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Principles underlying the design, construction and operation of direct current generators and motors. Experimental study of the behavior of different types of motors and generators, efficiency tests and adjustments of machines for different conditions of service.

5. **Alternating Currents and Alternating Current Machines.**—Five credits; first semester; prerequisites, Mathematics 11, Physics 4, and Electrical Engineering 1, 2 and 4. A course similar to Electrical Engineering 3 but taking up the general theory of alternating currents more thoroughly and treating the whole subject more completely. This course is intended for electrical engineering students only.

6. **Dynamo Design.**—Three credits; first semester; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1, 2, 4 and 5 coordinately with this subject. In this course the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

7. **Electric Light and Power Distribution.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1, 4 and 5. A study of the costs of producing electric power, distribution and wiring, selection of lamps and light distribution, interior and street illumination, electrolysis and batteries, regulating and measuring apparatus, and as many other related subjects as the time will permit.

8. **Electric Traction.**—Five credits; first semester. Various features of electric car and train operation will be studied. Among these will be types of cars, motors and controlling apparatus, the operating characteristics of various types of equipment, power stations for this kind of service, transmission lines, substations, and distributing systems. A considerable portion of the time assigned for laboratory work in the subject will be given to the inspection of traction systems in actual operation upon which accurate and detailed reports will be required.

9. **General Principles of Electrical Engineering.**—Three credits. The course will consist of a mathematical treatment of the fundamental principles of electricity and magnetism, and the application of these principles of circuits, systems and machines in regular commercial use. In some ways the course will be a review of all the electrical work of the two preceding years, but for the most part the methods used will be quite different and much more comprehensive. The object of the course is to give the student a better perspective of the whole subject of applied electricity and to develop more direct methods for solving problems in this field.

10. **Electrical Design.**—Three credits; first semester; prerequisite, all the work required for the Bachelor's degree in this department. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

11. **Power Stations.**—Five credits; second semester; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

12. **Long Distance Transmission.**—Two credits; second semester; prerequisite, Electrical Engineering 1 to 7 inclusive. Study of long distance line construction, protective apparatus, switchboards, cut-outs, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

13-14. **Thesis.**—Two or three credits each semester. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first), and reports concerning the progress of the work submitted from time to time, to the professor in charge.

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## CIVIL ENGINEERING

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**Professor Willis.**

The course in Civil Engineering is designed to give to the



young men of the state a broad education in general and scientific subjects; to give them a thorough training in the principles underlying engineering in general, and as much special training as time will permit in those subjects belonging particularly to the field of the civil engineer. The following are some of the many lines of work open to the graduates in this course. Surveying and Mapping, Highway Construction, Railroad and Railway Construction, Bridge Designing, Structural Steel and Concrete Building Designing; Irrigation and Drainage, the design, construction and operation of Water Supply and Sewage Disposal Systems, and engineering work for city, county, state or national government.

The greater part of the time of the freshman and sophomore years is devoted to the fundamental studies which give both general culture and preparation for the technical work of the following years. The study of and practice in Physics, Mathematics, Chemistry, English and Public Speaking is carried on; and the work in Mechanical Drawing, Machine Shop and Machine Design is given. The theory of Plane and Topographical Surveying accompanied by field work and map drawing is begun in the freshman year and continued in the sophomore year.

Practically all of the time of the junior and senior years is devoted to purely engineering subjects, a large portion of which are given by the Civil Engineering Department. These subjects might be considered as falling naturally into three groups or divisions of civil engineering, namely: (1) Municipal Engineering, including the subjects of Surveying, Highway Construction, Hydraulics, Sanitary Engineering and Irrigation; (2) Railroad Engineering; (3) Structural Engineering and Building Construction, including the subjects of Graphic Statics, Stresses, Structural Details, Structural Design, Bridges, Dams and Reinforced Concrete. A working knowledge of the laws relating to engineering contracts and specifications is of great value to all engineers and a short treatment of this subject is given.

To aid in carrying on its work, the department is provided with suitable equipment, which includes transits, levels, plane table, solar attachment, sextant, current meter, plani-



meter, protractor, rods, tapes and various hand instruments.

Men completing the work of the four-years course in this department are graduated with the degree of Bachelor of Science (B. S.). Those completing the additional fifth year course of study are given the advanced degree of Civil Engineer (C. E.).

A detailed description of each subject offered by the department follows:

1. **Plane Surveying.**—Two credits; second semester. The theory and practice of land surveying, including United States land surveys, computation of areas, dividing land and determining heights and distances. Field work with level and transit in determination of heights and distances and in making surveys of farms. Preparation required: Plane Trigonometry and Mechanical Drawing. Text: Breed & Hosmer's Principles and Practice of Surveying.

2. **Plane and Topographical Surveying.**—Four credits; first semester; prerequisite, Civil Engineering 1. Continuation of Plane Surveying together with the theory and use of the plane table, and of the transit and stadia. Pen topography and detailed field work; the construction of topographic contour maps, leveling, triangulation and adjustment of instruments. Text: Breed & Hosmer's Principles and Practice for Surveying.

3. **Graphic Statics.**—Two credits; first semester; prerequisite, Mathematics 9, 10 and 16, General Physics 3. Shears and bending moments in beams, center of gravity and moment of inertia of cross sections, analysis of stresses in roof and bridge trusses, mill bents and three hinged arches by graphical methods. Text: Merriman and Jacoby's Roofs and Bridges, Part II.

4. **Highway Construction.**—Two credits; first semester. The location, construction and maintenance of country highways and city streets. Text: Blanchard and Drowne's Highway Construction. Seniors and juniors take this subject at the same time, and it is given in alternate years only. It will be given in 1917.

5. **Hydraulics.**—Three credits; first semester; prerequisite, Mathematics 11, 12 and 16, General Physics 3. Hydrostatics and Theoretical Hydraulics. The study of flow of water through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; and application to engineering, water power plants and development. Text: Merriman's Hydraulics.

6. **Stresses.**—Four credits; second semester. Preparation required: Mathematics 13 and 16, and Graphic Statics. The theory and computation of stresses in roof and bridge trusses under dead, live and wind loads. Locomotive wheel loads on plate girders and

bridge trusses. Text: Merriman and Jacoby's *Roofs and Bridges*, Part I.

7. **Railroad Surveying.**—Three credits; second semester; prerequisite, Civil Engineering 1 and 2. Reconnaissance, preliminary and location methods, with theory of curves and turnouts. Location of a line, with the preparation of profiles and maps. The computation of earth-work and estimate of cost. Text: Allen's *Railroad Curves and Earthwork*. Seniors and juniors take this subject at the same time and it is given in alternate years only. It will be given in 1918.

8. **Structural Details.**—Two credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. Lectures on shop practice in making drawings and shop bills and in designing connections and other details for structural steel, including the design of beams, bearings, grillages, columns, struts and girders. Solution of problems required. Handbook: Carnegie Steel and Bethlehem Steel.

9. **Structural Steel Design.**—Three credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. The design and the making of general and detailed drawing of beams, columns, grillages, a roof truss, a plate girder railroad bridge and a riveted or a pin connected truss bridge. Reference Book: Conklin's *Structural Steel Drafting and Elementary Design*.

11. **Irrigation.**—Two credits; first semester; prerequisite, Civil Engineering 5. A study of the principles of irrigation engineering; namely, a consideration of fundamental questions underlying the design and construction of works for holding and controlling the waters needed for agriculture; and of those matters necessary to insure the financial success of the enterprise. Text: Newell & Murphy's *Irrigation Engineering*. Seniors and juniors will take this subject at the same time, and it is given in alternate years only. It will be given in 1918.

12. **Bridges and Dams.**—Four credits; second semester; prerequisite, Civil Engineering 3, 6, 8 and 9. Continuation of Civil Engineering 9 and a study of higher structures, including continuous, draw, cantilever and suspension bridges and metallic arches. The theory and design of masonry walls, dams and arches. Text: Merriman and Jacoby's *Roofs and Bridges*, Part IV.

13. **Contracts and Specifications.**—Two credits; second semester. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's *Engineering Contracts and Specifications*.

14. **Reinforced Concrete.**—Three credits; second semester; prerequisite, Mechanical Engineering 15 and 16, Civil Engineering 3, Mathematics 10 and 13. A study of manufacture and properties of

cement and reinforcing steel, and of the theory and design of plain and reinforced concrete construction. Text. Hool's Reinforced Concrete Construction, Vols. I and II.

15. **Sanitary Engineering.**—Three credits; second semester; prerequisite, Civil Engineering 5. The study of the principles to be observed in order that a pure water supply, and an efficient system of sewerage may be secured, and a study of the design, construction and operation of municipal water supply and sewage disposal. This subject is taken by seniors and juniors at the same time and is given in alternate years only. It will be given in 1919.

16. **Steel Buildings.**—Three credits; first semester; prerequisite, Civil Engineering 8 and 9. Design and general drawings of steel mill, mine and high office buildings, and arches.

17. **Dam and Reservoir Design.**—Three credits; first semester; prerequisite, Civil Engineering 3, 5 and 15, Mathematics 10, 11 and 13. The study of modern hydraulic construction, dams, reservoirs, levees, etc. Structures relating to water power, canals and irrigation.

18. **Hydraulic Motors.**—Three credits; first semester; prerequisite, Civil Engineering 5. A study of reaction and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

19. **Railroad Engineering.**—Three credits; second semester. The construction of the roadbed, including ballast, crossties, rails, switches, culverts, maintenance of way and elements of railroad operation. Economic location, arrangement of yards, station and terminals. Train resistance. Application of electricity.

20-21. **Thesis.**—Two and three credits each semester. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject. The subject and plan of the work should be submitted to the professor in charge not later than November first of the current year.

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## ENGLISH

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**Professor Bates; Associate Professor Powers; Miss Young.**

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition, and to give him an intelligent appreciation of English literature.

For English 1 to 8, see the preparatory department.

9-10. **Rhetoric.**—Three credits each semester; prerequisite, the English of the preparatory department. The main purpose of this course is to familiarize the student with the principles of rhetoric and to enable him to use them effectively in composition. To this end, written work is demanded constantly, and is carefully criticised both in the class room and in conferences between the instructor and the individual student. The work is supplemented with reading, in the choice of which the student is allowed considerable latitude.

11-12. **English Literature from 1625 to 1798.**—Three credits each semester; prerequisite, English 9-10. This course consists in a study of the literature, exclusive of prose fiction, of the ages of Milton, Dryden, Pope, and Johnson. A large amount of reading and frequent papers are required. Attention is paid, in lectures, to literary movements and the relation between literature and other phases of the life of the time.

13-14. **English Literature from 1798 to 1892.**—Three credits each semester; prerequisite, English 11-12. This course covers the literature, exclusive of prose fiction, of the ages of Wordsworth and Tennyson. Much reading and occasional papers are required. Lectures are given on nineteenth century writers and literary movements, together with their relation to other phases of the life of the time. Frequent conferences are held between the instructor and the individual student.

15. **English Literature, exclusive of Drama, from the Beginnings to 1625.**—Three credits; first semester; prerequisite, English 13-14. In this course special stress is laid on ballad and epic, Chaucer, and the development of the language.

16. **English Drama from the Beginnings to 1625.**—Three credits; second semester; prerequisite, English 15. Shakespeare and his contemporaries receive the main emphasis.

17-18. **Scientific and Social Ideas in Recent Literature.**—Three credits each semester; prerequisite, English 9-10. The aim of this course is to familiarize the students in the technical departments with some of the main scientific and social tendencies of the present time as these tendencies are mirrored in current and late nineteenth century literature in England and America. Frequent papers and oral class reports are required.

19-20. **The English Novel.**—Three credits each semester; prerequisite, English 11-12. This course deals with the development of the novel from the middle of the eighteenth century to the end of the nineteenth.



## MODERN LANGUAGE

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**Professor Spencer; Miss Schneider; Mr. Mahany.**

A good reading knowledge of some modern language is imperative for students pursuing work along scientific, technical or historical lines, and they are indispensable as literary and cultural subjects.

In the General Science, the Home Economics and the Agricultural Courses of the College, either French, German or Spanish is required during the freshman and sophomore years. Elective work in this department is offered and the student is strongly advised to take a third year if possible of the language chosen. In the second year German a special division reads scientific German.

1. **German.**—Four credits; first semester. German grammar and composition; reading and telling short stories for practice in speaking German; memorizing selected poems. Text: Thomas's Grammar.

2. **German.**—Four credits; second semester. Continuation of German 1. Texts: Storms' Immensee; Auerbach's Brigitta.

1a. **German.**—Four credits; first semester. More advanced work in grammar and composition, and story telling, than in German 1. Constant practice in speaking German, and reading and memorizing of German poems. Texts: Immensee, Geschichten von Rhein; Thomas's Grammar.

2a. **German.**—Four credits; second semester; continuation of German 1a. Constant practice in speaking German; memorizing poems and selected passages. Text: William Tell.

3. **German.**—Four credits; first semester. Prose and poetry of the last century; composition and conversation; memorizing of selected poems. Text: Geschichten von Deutschen Staedten.

4. **German.**—Four credits; second semester; continuation of German 3. Text: Schiller's William Tell. Additional reading and composition.

5. **German.**—Three credits; first semester. Written and oral composition, and readings such as Freytag's Journalisten and Goethe's Hermann und Dorothea.

6. **German.**—Three credits; second semester. Goethe's life and works; Goethe and Schiller; or Wenckebach's Meisterwerke des Mittelalters, with collateral reading.



**FRENCH**

1. **French.**—Four credits; first semester. French grammar and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Text: Fraser and Squair's Grammar.

2. **French.**—Four credits; second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: Super's Reader; *Le Tour de la France par deux Enfants*.

3. **French.**—Four credits; first semester. Readings from nineteenth century writers; Koren's French composition.

4. **French.**—Four credits; second semester. Continuation of French 3. Advanced composition and conversation.

5. **French.**—Three credits; first semester. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time.

6. **French.**—Three credits; second semester. Open to those who have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought.

**SPANISH**

1. **Spanish.**—Four credits; first semester. Spanish grammar and composition. Rules of pronunciation and construction. Text: DeTornos' Combined Spanish Method.

2. **Spanish.**—Four credits; second semester. Continuation of Spanish 1. Vocabulary of every day life emphasized.

3. **Spanish.**—Four credits; first semester. Completion of all verb forms. Practice in connected speech. Selected readings from modern authors.

4. **Spanish.**—Four credits; second semester. Conversation on practical topics. Reading of Spanish newspapers and periodicals.

**HISTORY AND POLITICAL SCIENCE**

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**Professor Harding; Assistant Professor Young.**

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political

and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

For History 1 to 6, see the preparatory department.

**7. Modern History.**—Three credits; first semester. Political and social history of Europe from 1500 to 1815. A survey of sixteenth century Europe, dynastic and colonial rivalry. European society and governments in the eighteenth century, the French Revolution and the era of Napoleon. Lectures, text-book, readings, papers and reports. Text: Hayes Political and Social History of Modern Europe, Vol. I.

**8. Modern History.**—Three credits; second semester. Continuation of History 7. History of Europe from the Congress of Vienna to the outbreak of the war of the nations, 1914. The era of Metternich, the growth of democracy and nationalism, the United Kingdom, Latin Europe, Teutonic Europe, the Russian Empire, the Eastern question, social factors in recent European history, national imperialism, international relations 1871-1914, and the outbreak of the great war. Text: Hayes Political and Social History of Modern Europe, Vol. II.

**9. American History.**—Three credits; first semester; prerequisite, History 7 and 8. A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources.

**10. American History.**—Three credits; second semester. Continuation of History 9. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

**11. American Government.**—Three credits; first semester. General survey of federal, state, and local governments in theory and practice. Emphasis in this course is placed upon real governmental operations. Text book, discussions, and reports. Text: Young's New American Government.

**12. Political Parties and Practical Politics.**—Three credits; second semester. This course considers such topics as the characteristics and importance of parties, nominating methods, party machinery, campaign methods, party finance, educational and other suffrage qualifications, election laws, the spoils system, civil service reform, machines and bosses, practical politics in legislative bodies, state and local politics, and remedies for legislative evils. Text-

book, discussions and reports. Ray's Political Parties and Practical politics.

13. **Economics.**—Three credits; first semester. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

14. **Sociology.**—Three credits; second semester. The fundamental principles of social science. Text-book, supplemented by lectures and special reports. Text: Blackmar and Gillin's Outlines of Sociology.

15. **Rural Sociology.**—Two credits; first semester. A general survey of the field of rural sociology, including the following topics: Types of communities, movements of population, advantages and disadvantages of farm life, social conditions and life of rural people, rural health and sanitation, the various social institutions of the rural community, boys' and girls' clubs, farmers' clubs, the grange, the rural church and the rural school, an analysis of the fundamental problems of rural life; the country life movement and the reorganization of rural social forces. Text book, readings, and reports. Text, Gillette's Constructive Rural Sociology.

16. **Rural Economics.**—Three credits; second semester. The economic elements in the production and distribution of agricultural wealth, the agricultural market, determination of price, speculation, business co-operation, credit facilities, ownership and tenancy, farmers' organizations, the farmer and legislation, problems of rural social life, the relation of the farmer to the state. Text-book, lectures, readings and reports.

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## PUBLIC SPEAKING

Professor Brown.

To meet the ever increasing demands of the spoken word as a factor in leadership, and to develop skill in interpretative reading, the following courses are offered:

1-2. **Literary Interpretation.**—Three credits each semester. Voice training, bodily expression, oral interpretation and analysis of the lyric and drama. The aim of this course is to gain a keener appreciation of imaginative literature and to render it naturally and effectively.

3-4. **Extempore Speaking.**—Two credits each semester. For agricultural and general science students. Student trained to think and express himself while on his feet. Criticism on the organization and presentation of material. Attention is given to gesture, voice and such elements of grace as are essential to effective speaking. (Two sections.)

3a. **Extempore Speaking.**—Two credits; second semester. Same work as 3. Required of home economics students.

5-6. **Extempore Speaking.**—Two credits; first and second semester. Required of Engineering students. Same work as 3-4.

7. **Argumentation and Debate.**—Three credits; first semester. A study of the problems underlying conviction and persuasion. Analysis and briefing of public questions. Development of briefs into forensics and drill in their vigorous presentation. This course is especially recommended to those students who may be looking forward to taking part in intercollegiate debating.

8. **The Speech for Special Occasions.**—Three credits; second semester. A study of form for the special occasion, the speech of the president, the commemorative speech, the speech of dedication, of acceptance, of response, the speech of welcome. In addition to extempore work, written speeches will be required.

9-10. **Public Address.**—Two credits each semester; prerequisite, Public Speaking 3-4. The Rhetoric of Oratory. A study and presentation of the various forms of public address. The writing and delivery of orations. Attention to those elements of psychology which are basic in public speaking.

11-12. **Elementary Public Speaking.**—Four credits each semester. Articulation and flexibility of voice. The study and reading aloud of short poems, extracts from speeches for the development of ease and confidence. Extempore Speaking. Open to the pupils of the School of Agriculture. Elective in the junior or senior year.

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## EDUCATION

**Professor Brady.**

The State College receives numerous requests from school officials for teachers for various types of positions. The demand for \*Manual Training teachers, Principals and Superintendents of Agricultural and Industrial High Schools, teachers of Home Economics (Domestic Science and Domestic Art), teachers of Agriculture, and Scientific positions in general—who have professional training in public school matters—is greater than the supply. It is the function of the Department of Education to equip young men and women who are preparing themselves for teachers with professional training for their work. A student desirous of securing the State Certificate of South Dakota can do so by electing fifteen hours work



in the Department of Education (not omitting Educational Psychology, Principles of Teaching, and History of Education). The courses in Education are planned to give a clear grasp of the organization and administration of public education with special emphasis on the present theory and practice in educational procedure. The purpose is to make all courses concrete and practical.

\*There is a large demand in the High Schools of the northwest at the present time for teachers of manual training in connection with other subjects. Students expecting to teach manual training should complete the following work in Mechanical Engineering; Woodwork, six credits, Mechanical Drawing, three credits, and Forging, two credits.

1. **General Psychology.**—Three credits; first semester. The structure and function of the nervous system; discussions of the several phases of the mental processes with special emphasis upon their origin and functions, and their application to educational development. Lectures, assigned readings, demonstrations and experiments.

2. **Educational Psychology.**—Three credits; second semester. A systematic course treating of fundamental laws of learning in animals and man, the effect of practice, the rate and limits of improvement, the conditions for the most economical learning, the measurement of progress in school subjects, mental hygiene and fatigue, the transfer of training, etc. Lectures, recitations, required readings, experimentation.

3. **History of Education.**—Three credits; first semester. A consistent survey of such periods in the history of educational progress as will serve in the interpretation and solution of our present day problems.—Education in a non progressive versus a progressive society.—The rise of individualism in education, state control and public systems; evolution of modern high schools, the elementary school, the kindergarten, vocational education, education of women, the training of teachers; foundations for the scientific, psychological and sociological tendencies of our present day education; the effects of the disciplinary and humanistic conceptions upon educational progress; the contributions to educational theory by Luther, Melancthon, Pestalozzi, Herbart, Froebel, Horace Mann, Spencer, Dewey and others. Lectures, recitations, assigned readings, discussions.

4. **Principles of Teaching.**—Three credits; second semester. An application of the principles of Psychology to the technique of instruction; observation of the application of these principles in the practice school; discussions of various types of lessons, the various aims and principles of the teaching process, physical welfare of



children, moral training, discipline, lesson plans, supervision and its purposes, examinations, etc. Lectures, readings, observations, reports.

5. **School Administration.**—Three credits; first semester. Organization and Administration of Public School systems in the United States. Measurement as a modern scientific instrument of supervision and administration. A brief introduction to statistical method, frequency tables, the application of scientific forms to the measurement of school achievement; fundamental bases for organizing school children, retardation, acceleration and elimination; grading and promotion; special classes; home work; medical inspection; extension of the school activities; special modifications of the course of study; discipline; compulsory education; responsibility of the schools to the public; comparative systems of education both local and foreign. Lectures, discussions, assigned readings, reports.

6. **Educational Sociology.**—Three credits; second semester. A study of the modern social demands for the re-organization of school systems, of methods of teaching, of courses of study, of the professional training of teachers, and of school equipment. The origin and growth of public sentiment, its importance and influence on social control. Some concrete studies of the principles of interdependence between the school as an institution, and modern social needs as exemplified in recent school survey movements. Some surveys which will receive attention are Minneapolis, Portland, Butte, New York City, Seattle, Bloomington, Ohio, etc. Lectures, discussions, problems and assigned readings.

7. **Educational Measurements.**—Three credits; to be given as demanded. A study of the more recent psychological and pedagogical methods and tests in the measurements of mental and physical development and their bearing upon educational progress. Attention will be given to individual differences in vital capacity, nutrition, growth, sensory and motor discrimination and control, fatigue, blood pressure, attention and association tests, visual and auditory acuity, dermal consciousness, etc. Attention will also be given to standard tests in arithmetic ability, for pedagogical age of intelligence, standards in handwriting, scales in composition and others.

8. **Supervision and Practice Teaching.**—Eight credits; one year course, four periods per week. A careful study of the best pedagogical literature upon the subject taught. Daily lesson plans, carefully criticised then followed by teaching. Daily practice and observations in the class room with full charge of a class under competent supervision. Offered only to seniors who have completed practically twelve hours in Education. Elective in the senior year.

## AGRICULTURAL JOURNALISM AND ADVERTISING

**Professor Starring.**

The following introductory courses in agricultural journalism are designed to assist prospective rural leaders in writing entertainingly and helpfully upon subjects in which they are interested. News values, fact values, and proper emphasis on them are matters of prime importance. The need of training in agricultural advertising is also apparent to the prospective farmer who intends to receive the greatest cash return from his efforts. The course will be especially helpful to those who become public servants as teachers, county agents or specialists, for they will be expected not only to prepare many articles for publication, but also to assist others with advertising and sales problems.

1. **Elements of Agricultural Journalism.**—Two credits; first semester; for seniors. A study of the news style of writing. Lectures on newspaper style as a model in effective writing. Lectures on methods of preparing copy for agricultural and technical journals. Practice in writing agricultural news for publication.

2. **Agricultural Advertising.**—Two credits; second semester; for seniors. The principles of advertising. Use of language, type, and media to assist in selling agricultural products. Writing of sale bills. Planning and arranging sale books. Use of illustrations. Design of farm letterheads. Composition of effective sales correspondence. Advertising farm meetings, county fairs, etc.

3. **Journalism For Women.**—One credit; second semester; for senior girls in home economics. Writing upon home economics subjects for farm papers and women's journals. Method of study similar to course 1.

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## MATHEMATICS

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**Professor Brown; Assistant Professor Mills.**

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems

and original demonstration forming an important part of each course.

A course in the theory of teaching mathematics may be given in case a sufficiently large number desire it.

For Mathematics 1 to 7, see the preparatory department.

8. **College Algebra.**—Three credits; first semester; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9-10. **Plane and Spherical Trigonometry.**—Two credits each semester; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of triangles.

11. **Analytic Geometry.**—Five credits; first semester; required in the Engineering Courses, sophomore year; prerequisite, Mathematics 8 and 9.

12. **Calculus.**—Five credits; second semester; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. **Calculus and Analytic Mechanics.**—Five credits; first semester; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solution of mechanical problems.

14. **Analytic Mechanics.**—Three credits; second semester. Continuation of Mathematics 13.

15. **General Astronomy.**—Three credits; second semester; prerequisite, elementary mathematics. The text will be covered and frequent use made of the instruments.

16. **Elementary Mechanics.**—Two credits; second semester; prerequisite, Mathematics 8 and 9.

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## PHYSICS

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**Professor Mathews. Associate Professor Hoy.**

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest opera chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are furnished for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscopes, photometers, stereopticon (arc light), standard cells, dynamos, electrometers, transformers, galvanometers, storage batteries, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, Kelvin's current balances, lathe and wireless telegraphy and X-ray apparatus.

The following subjects are offered in this department:

For Physics 1 and 2, see the preparatory department.

3. **General Physics.**—Five credits; first semester. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids, heat and sound with numerous examples. Exact measurements of mass, distance, time, calorimetry, nature and velocity of sound, etc.; study of electrical and magnetic fields.

4. **General Physics.**—Five credits; second semester. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; refraction and reflection of light, interference and color. Laboratory work on topics mentioned.

5. **Advanced Physics.**—Four credits; first semester, prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis. Laboratory work and measurements covering topics mentioned. Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

7. **Heat.**—Four credits; first semester; prerequisite, Physics 5. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity, and dynamical equivalent of heat, laboratory work covering topics mentioned.

8. **Light.**—Four credits; second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.



9. **Household Physics.**—Three credits; first semester; prerequisite, Mathematics 4. Especial emphasis is laid on practical applications of heat, machines, electricity, etc., in the home.

10-11. **Practical Physics.**—Three credits; first and second semesters. This course is open to students in the agricultural groups. The general subjects discussed in physics will be considered but special emphasis will be placed upon topics of practical interest and upon practical application of physical principles.

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## BOTANY AND PLANT PATHOLOGY

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Professor Michel; Mr. Petersen.

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and function are studied, as well as the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as a foundation for courses in forestry, plant breeding, plant pathology, etc.

This instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are well equipped with microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete, convenient herbaria of the flowering plants and fungous flora of the northern United States.

2. **General Botany.**—Four credits; first semester; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

3. **General Botany.**—Four credits; second semester; prerequisite, Botany 2.

4. **Plant Physiology.**—Four credits; second semester; prerequisite, Botany 2 and 3, Chemistry 11. This course deals with the life processes of plants, such as photosynthesis, respiration, fermentation, transpiration, irritability, nutrition, growth, and reproduction; and how these processes are influenced by changes of environment, such as differences in amount of moisture in air and soil, amount of light, and effects of nutrient and injurious salts in the soil, etc.



5. **Plant Pathology.**—Four credits; first semester; prerequisite, Botany 2 and 3. The first part of the term is devoted to the cause, nature and classification of the fungi, special emphasis being placed on the organisms of economic importance; the latter part of the course is devoted to the morphology of the diseases and their control, especially those found in South Dakota. In the laboratory work the student is, as far as possible, brought into direct contact with the diseases as found in the field.

6. **Advanced Plant Pathology.**—Elective in the junior or senior year. The course will be given to such students as have had Botany 5 or equivalent work. The laboratory hours and the recitations to be arranged with the instructor. The number of credits will depend upon the amount of time given to the work, which will consist of individual laboratory work and assigned readings.

7. **Classification of Pteridophytes, Gymnosperms, and Angiosperms.**—Four credits; first semester; prerequisite, Botany 2 and 3. The classification of ferns, conifers, and flowering plants. Especial attention will be given to plants of economic importance in South Dakota; such as trees, grasses, weeds and poisonous plants. A number of field trips will be made during the fall. Part of the laboratory work may be done by making a collection of plants during the summer.

8-9. **Plant Histology.**—Four credits each semester; prerequisite, Botany 2 and 3. The work will consist of the embedding, sectioning and staining of tissues from the various groups of plants. Text-book: Chamberlain's Methods in Plant Histology.

10. **Heredity.**—Three credits; second semester. The work is offered in connection with the Department of Horticulture, which will give practical work along the line of plant breeding. This course deals with the principles of variation and heredity, and their bearing upon the theory of organic evolution. The first part of the semester will be devoted to the general principles of heredity and their application to man, the latter half will deal with plant breeding and its practice in this state. Texts: Castles' Genetics & Eugenics and Bailey's Plant Breeding.

12. **Economic Botany.**—(Weeds and Poisonous Plants.)—Three or four credits; second semester. A study of our common weeds; their methods of reproduction and disposal, methods of eradication, significance of dormancy and longevity of seeds, determination of weed seeds especially such as are found in grass and grain seed. In the spring seeds will be planted and the seedlings studied. Students intending to take this course should make a collection of weeds and weed seeds in the summer or fall.

## ZOOLOGY AND RURAL SANITATION

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**\*Professor Miller; Mr. Miller; Mr. Nelson.**

Students of Agriculture and Domestic Science as well as those of General Science, should have a thorough foundation in the principles of Animal Biology, and this is what the department aims to accomplish. Besides this it trains the students in methods of zoological research and technique, and attempts to develop original and independent thought.

Students who contemplate the study of human or veterinary medicine will find that it is to their advantage to elect advanced work in the department. These professions are biological sciences and one should have a most thorough training to enter them. For those courses which are the so-called pure scientific courses in medicine credit is usually given and the student is privileged to elect other work in the professional school.

The department is well equipped with apparatus for the courses offered. Microscopes, type specimens, skeletons, for the general course, microtomes, ovens, glassware, stains and reagents for the advanced work furnish as excellent equipment as one would wish. There is a small but well chosen working library of about two hundred volumes.

For Zoology 1 and 2 see the Preparatory Department.

**3-4. General Zoology and Physiology.**—Four credits each semester; prerequisite, Art 1 and all the subjects below the sophomore year.

**a. General Zoology.**—A study of type forms of invertebrates and vertebrates, and the elements of histology and embryology. Texts and references: Galloway's Zoology; Parker & Haswell; Hertwig's Text Book of Zoology.

**b. Physiology.**—This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and references: Pearce & McCord's Physiology; Howell's Physiology.

**5-6. Anatomical Methods.**—Four credits each semester. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection.

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\*Absent on leave during 1916-17.

It includes the study of the anatomy of the cat, with special reference to Physiology. Texts: Davidson's Mammalian Anatomy; Riegart and Jennings' Anatomy of the Cat; Morris' Human Anatomy; Grays-Piersol's Anatomy.

7-8. **Histology.**—Four credits each semester; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements, together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's Text-Book of Histology; Wilson's The Cell; Stohrs and Szymonowicz-MacCallum's Text-Book of Histology.

9. **Vertebrate Embryology.**—Three or four credits; first semester. This course includes the study in the laboratory of the processes of fertilization, cleavage, principles of growth, formation of the germ layers and the foetal membranes, as well as the study of the development of some system of organs. For four hours credit the student must prepare a series of microscopical preparations of at least four stages of trout, chick and pig embryos, and make a model of the development of some organ. Students electing this course must have completed Zoology 3 and 4 or 5 and 6, or equivalent. Prentis-Human Embryology; Hertwig's Embryology; Man & Mammals.

10. **Bacteriology.**—Four credits; first semester. The course includes the study of morphology and biology of the bacteria and special reference is made to Public Health. The laboratory work consists of technique and the study of several of the common forms of bacteria. Text: Jordan. References.

11. **Applied Bacteriology.**—Four credits; either first or second semester. Class conferences twice a week. Laboratory work on methods of air, water and soil determination.

12. **Comparative Anatomy.**—Three or more credits; second semester. A comparative study of the skeletal, digestive, vascular, nervous and unorgental systems of the vertebrate. For five hours credit, the student must make a comparative study of the development of some system in three groups, and make models.

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## ENTOMOLOGY AND NATURE STUDY

Professor Severin; Mr. Gilbertson.

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the

principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, the department is provided with a large number of lantern slides, microscopic slides, alcoholic and formalin preparations, as well as samples of insecticides and fungicides, spray machinery and accessories, and other apparatus used in combatting insects. The department is well provided with all the apparatus necessary for biological work.

For Entomology 1 and 2, see the preparatory department.

**3-4. General Entomology.**—Two credits first semester, three credits second semester. A general course dealing with the anatomy, physiology, embryology, behavior, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

**5-6. Economic Entomology.**—Three credits each semester; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects with a study of insecticides, spraying machinery and other apparatus used in combatting insects. The student will be given an opportunity of preparing sprays and gases used in combatting insect pests, and demonstrations will be offered in the practical application of the insecticides. Each student will be required to work out the life history of three species of insects that are of economic importance and to mount these in exhibit cases.

**7-8. Systematic Entomology.**—Two or more credits each semester. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give the student an idea of the aims and methods of classification. Each student will be required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

**9. Household Pests.**—Three credits; second semester. The household insects and other animals that are of economic importance will be especially emphasized in this course, together with methods of extermination.

**10. Medical and Veterinary Entomology.**—Two credits; first semester. The greater share of the semester will be devoted to a discussion of the diseases which are disseminated through insects and which affect man and domestic animals.



11. **Bird Study.**—Three credits; second semester. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds, while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's Handbook of Birds of Western North America.

12. **Nature Study.**—Three credits; first semester. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature point of view and the course will be a discussion of methods and materials as well as an elementary science treated from the biological side.

13. **Animal Behavior.**—Two credits; first semester. The evolution of animal behavior forms the principal theme of this course and is of much significance for the study and correct understanding of human psychology and sociology. This course will be useful to those engaged in educational work.

14. **Beekeeping.**—Three credits; first semester. Especial emphasis will be placed upon the practical side of Beekeeping in this course. The laboratory work will deal with a study of Apiary methods, including the manipulation of bees, spring management, swarm control and increase, production of extracted and comb honey, care of bees in winter, apiary apparatus and the anatomy, physiology and development of bees.

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## CHEMISTRY

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Professor Shepard; Associate Professor Dunbar; Assistant Professor Binnewies; Mr. Sherwood, Mr. Serles; Mr. Rowe.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, is furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates one hundred and twenty students, all working at the same time.



Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates sixty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemner quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The organic laboratories are capable of accommodating eighty students and are equipped with a large assortment of apparatus especially fitted for this branch of chemical science, which today forms so important a part of the prospective chemist's education.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

1. **Elementary Inorganic Chemistry.**—Four credits; first semester; prerequisite, Physics 2. History of Chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids, and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. **Elementary Inorganic Chemistry.**—Four credits; prerequisite, Chemistry 1. This semester is devoted to a study of the metals, their occurrence and commercial production from the ore, they being studied from the viewpoints of industrial use and the identification by analytical processes of the metal ions; and the working of a list of unknowns. Text: Shepard's Elements of Chemistry.

3. **Quantitative Chemistry.**—Three credits; second semester; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores, the first half of the work being gravimetric and the latter half, volumetric. Text: Olson's Quantitative Chemistry.

4. **Chemistry and Physiology of Foods.**—Four credits; second semester; prerequisite, Chemistry 1 and 2. Food nutrients, chemical

characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulterations. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives. Lectures and laboratory exercises.

5. **Agricultural and Sanitary Analysis.**—Four credits; first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Analysis of disinfectants, germicides, water-analysis, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.**—Three credits; second semester; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.**—Three credits; first semester; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples, including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaching and dyeing. Text: Thorpe's Industrial Chemistry.

8. **Household Chemistry.**—Four credits; first semester; required in the sophomore year of the Home Economics Course; prerequisite, Chemistry 1 and 2. Students in four years Home Economics Course intending to specialize in Chemistry should take Chemistry 3 instead of Chemistry 8. This course includes the chemistry of cooking, baking, fermentation, cleansing agents, water, soaps, inks, stains, disinfectants, preservatives, etc., as applied to good housekeeping in every day life. Lectures, notes and references. Text: Snell's Elements of Household Chemistry.

9. **Organic Chemistry.**—Five credits; first semester. The Aliphatic compounds. Chemical theory and principal compounds of the paraffine series. The preparation of typical members. Typical analytical methods. Text: Norris' Organic Chemistry with explanatory lectures.

10. **Organic Chemistry.**—Five credits; second semester; a continuation of Chemistry 9. Theory, structure, preparation and analysis of the Benzenes, Naphthalenes, Anthracenes, Pyridines, Alkaloids, Amino Acids, Terpenes, Dyes, etc.

11. **Organic Chemistry.**—Four credits; first semester; prerequisite, Chemistry 1 and 2. An elementary course in Organic Chemistry. Includes the general theories, and typical reactions of the aliphatic and aromatic compounds. Preparatory to the practical application of this knowledge in advanced agricultural work. Text-book: Norris' Organic Chemistry.

## PHARMACY

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Professor Whitehead; Mr. Serles.

### PURPOSE

The purpose of this department is to train young men and women in the science of pharmacy. The passage of the Food and Drug Act by Congress, and similar legislation by our own state has placed very great importance on pharmaceutical education. Under the present commercial conditions it is nearly impossible for one to prepare himself to meet the requirements of these laws except by taking a thorough college course.

The demand for educated pharmacists is becoming greater every day. In fact, even at present, some of the states will not allow one to take the examination for registration unless he is a graduate of a reputable school. This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

Graduates from the Department of Pharmacy in the State College have been uniformly successful in passing the State Board examinations, only two having failed to meet the requirements of the Board during the past nineteen years.

Among the regulations of the South Dakota State Board of Pharmacy is the following:

"Hereafter during the year 1906, all applicants appearing for registration by examination, must present with their application an affidavit showing that they have completed a course of study (or its equivalent) of one year high school work. In 1907, two years; in 1908, three years, and in 1909 the presentation of a high school diploma will be required. These requirements were recommended by the Association in annual meeting at Canton in 1903. It is therefore expedient that all proprietors doing a drug business in this state acquaint their clerks and apprentices with the above rule."

In order to harmonize our work with this regulation we require the completion of four years of high school work or its equivalent. While this is a much higher requirement than most schools demand, we feel that the results have justified our judgment, for at present there are but two of our graduates who have taken the state examination who are not registered.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The students finishing the two year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.) This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy. The two years of pharmacy work may all be applied towards the degree of Bachelor of Science. For the additional subjects required, see Pharmacy Schedule. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

The following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy:

1. **Pharmacy Latin.**—Three credits; first semester, first year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Crothers and Biers, Elements of Pharmacy Latin.

2. **Materia Medica.**—Five credits; first semester, second year. Medical properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment. Text: Potter's Materia Medica, Pharmacy and Therapeutics.

3. **Materia Medica.**—Five credits; second semester, second year. Continuation of Pharmacy 2.



4. **Pharmacy.**—Five credits; first semester, second year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's Practice of Pharmacy.

5. **Pharmacy Laboratory.**—Three credits; first semester, second year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, must be taken up in connection with it. Text: Remington's Practice of Pharmacy.

6. **Pharmaceutical Problems.**—Two credits; first semester, first year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's Pharmaceutical and Chemical Problems.

7. **Pharmacy.**—Five credits; second semester, second year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions.

8. **Pharmacy Laboratory.**—Four credits; second semester, second year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions. Must be taken same semester as Pharmacy 7. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions, Olberg's 1,500 Prescriptions, National Formulary.

9. **Volumetric Analysis and Drug Assaying.**—Four credits; second semester, second year; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoeia 315 volumetric, gravi-metric and other assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis; lecture notes by the teacher.

10. **Pharmacognosy.**—Four credits; second semester; prerequisite, Botany 2. The habitat, classification, characteristics, histology, identification, and adulteration of the official crude drugs. Special attention is also given to the physiological action of the active principles in each drug. And a limited study of the growth of some of the more common medicinal plants is carried on by the student.



## MUSIC

Professor Hedge; Assistant Professor Peterson; Assistant Professor Christensen; Miss Clisby; Miss Trimble; Miss Burrows; Miss Smith.

The purpose of this department is to give the very best musical training possible at a minimum cost, without sacrificing the high standards of the institution.

It is generally recognized that few branches of study require a greater and broader training of the mind than does the study of music, and not only cultivation of the mind, but of the emotions as well. The emotional is a phase too often neglected in education, although it has so important a part in life. In music one must learn to control—to keep in the background—one's own emotions, in order to give true expression to the thoughts of the master minds which have so wonderfully woven the beautiful harmonies.

A knowledge of music also serves to give proper balance to an education, the aesthetic side of which is too often neglected.

Our course is arranged with a view to supplying the needs more especially of those who wish to broaden themselves and to make it a part of their general education.

## ADVANTAGES

Opportunities are given for the hearing of the best music during the school year, which is a most important adjunct to proper musical education. These occasions include our high-grade faculty concerts, and an Artists' course which consists of recitals by some of the best musicians of the country. It is also planned to bring one of the Symphony Orchestras here for a concert each season.

During the past school year the following concerts, oratorios and recitals have been given under the supervision of the Department of Music: October 15th, Sunday afternoon concert, by Faculty Concert Party; November 19th; Historical Piano Recital, by Henry Loudenback, of Atchison, Kan.; December 5th, Choral Union and Symphony Orchestra, went in

special train to Tyler, Minn., to give Handel's "Messiah" afternoon and evening concerts; December 8th, Choral Union gave their fourth annual production of Handel's "Messiah," in Big Four Concerts; January 14, 1917, Carl Christensen String Quartet gave Sunday afternoon concert; January 26th, annual Military Band Concert in Big Four Concerts; February 18th, S. D. S. C. Harmony Male Quartet gave Sunday afternoon Concert; February 23rd, Symphony Orchestra Concert annual concert in Big Four Concert; March 16th, Choral Union gave Mendelssohn's "Elijah" in Big Four Concerts; April 15th, S. D. S. C. Ladies' Quartet gave Sunday afternoon concert; April 3rd, Graduate Piano Recital, by Miss Maurine Moore, assisted by Miss Leonora Pier, soprano, April 23rd, Graduate Piano Recital, by Miss Margaret Norman, assisted by Miss Lela Linn, contralto; April 29th, Violin Recital, by Frederick A. Cooke, of Minneapolis; May 20th, Sunday afternoon concert; June 1st, Annual Faculty Recital. Six music students convocations and students recitals were given during the school year exclusive of the graduate recitals.

The soloists heard in concert, oratorio and recitals during the past school year were: Bohumir Kryl, World Famous Cornetist; Josephine Kryl, violinist; Marie Kryl, pianist; Sibyl Sammis-MacDermid, James G. MacDermid, soprano and pianist, of Chicago; Lucille Stevenson, soprano, of Chicago; Harry Phillips, baritone, of Minneapolis; Dwight E. Cook, tenor; Henry Loudenback, pianist, of Atchison, Kan.; Frederick A. Cooke, violinist, of Minneapolis; Ida Elizabeth Trimble, contralto, Evelyn Rude, soprano; Leonora Pier, soprano; Gerhart Oylo, basso; Marion G. Carlisle, contralto; Carl Christensen, violinist; Sylvia C. Clisby, pianist and cellist; W. A. Peterson, pianist; Alice Iona Burrows, pianist; Walter Whitmus, tenor; Henrietta Smith, violinist; Cecil Brown, violinist; H. H. Pickett, cornetist; Garnett Hedge, tenor.

The Faculty Concert Party gave three concerts during the season at Strandburg, S. D., Miller, S. D., Watertown before the State Educational meeting.

The State College Military Band also made a most suc-

cessful concert tour to the Black Hills and received a most enthusiastic reception at each of the nine points visited.

In addition to these advantages, Prof. Hedge will train and direct, free to all College students and to outside singers, a choral union, a chapel choir of twenty-four picked voices, a men's glee club, and a women's glee club.

One credit a year will be given to Juniors and Seniors for choral singing in either Choral Union or Chapel Choir, provided the work is carried the full school year.

Professor Christensen will conduct the College bands and orchestra, both of which have already made an excellent reputation throughout this part of the country.

The Men's Glee Club and Orchestra have made tours during the last three years through different parts of the state and have met with great enthusiasm and success.

Recitals are also required of all students at various times during the year and attendance is obligatory upon every student in this department.

### CONDITIONS FOR ENTRANCE

The candidate for admission to the College must be at least fourteen years of age and of good moral character, and must have completed the work of the public schools as far as the ninth grade.

Students of music who have not completed the requirements for entrance to the freshman class will be required to take at the same time two text book subjects of the preparatory course.

### STUDENTS' CONVOCATION

The Music Students' Convocation meets once each month at which programs are given by students or faculty. As this is part of the school work each student of music is required to be present.

### COURSES

Three courses are available for students of this department:

1. Preparatory.
2. Academic.
3. Collegiate.

The Preparatory Course is open to all beginners and consists of rudiments, tone production, formation of correct habits of thought and execution, etc.

The Academic Course is for those who do not desire to complete the full course, but only to become fairly proficient as performers and to secure a general knowledge of the fundamental principles of the art. At the completion of this course, the student is awarded a certificate of proficiency or merit.

The Collegiate Course leads to graduation and consists of four years' work. To complete this course, the student must have secured a thorough knowledge of harmony, theory and history as outlined in these respective courses. Upon its completion, the student will be given a diploma in music, provided the entrance requirements to the freshman class have been completed.

For convenience, music students who have completed the entrance requirements to the Freshman class and one year of the Collegiate course in music will be ranked as though they were carrying full college work, provided that in addition to the full Collegiate course in music they carry other college work amounting to twelve credits. In such work of the department as may be sufficiently advanced, college credit will be given and a reasonable amount counted towards the completion of the requirements for the Bachelor's degree.

## VOICE

**Prof. Hedge; Miss Trimble.**

The method used is the correct placing of the voice so that the pupil can produce with equal ease and firmness and with an even quality, all tones from the lowest to the highest. The mechanism of the voice is explained as far as necessary.

In correct breathing, correct position in singing and chest development lies the foundation of voice building.

The course of instruction is based on the Italian School of training the voice. The fundamental principle of the old Italian teachers was to poise the voice. From this comes the even scale, the range, the power to sustain, and the agility, all of which combined formed the "bel canto" or beautiful singing.



Special attention is paid to the needs of each individual, with exercises and studies carefully selected according to the requirements of each voice.

Study will be made of the interpretation of songs and ballads chosen from the best of the German, Italian, French, English and American schools, with strict attention to phrasing, enunciation and rhythm.

### Voice Outline

First Year.	Second Year.	Third Year.
Voice Culture.	Voice Culture.	Vocal Culture.
Piano.	Piano.	Song Literature.
Sight Reading.	Harmony.	Theory,
Musical History.	Languages.	Church Music.
Languages.	Ear Training.	Hymnology and
Songs.	Songs.	Oratorio, Opera Airs.
		Harmony.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

### First Year

The formation of tone; elementary exercises for the development of the voice and art of respiration; Seiber's thirty-six eight measure vocalises; exercises in articulation and art of phrasing; easy and pleasing songs in English.

### Second Year

Exercises in scales, precision and flexibility; studies by Lutgen, Coneccone, Tosti, Vaccai; songs from German and English composers.

### Third Year

Exercises in scales, precision and flexibility continued; advanced vocalization; songs by Schubert, Schumann, Franz, Brahms, and arias and duets from operas.

### Fourth Year

Exercises continued as above with studies in bravoura singing. Exercises and solfeggios used, classified according



to difficulty, are those of Concone, Marchesi, Lamberti and Brambilla. Recitatives and arias from the standard oratorios and operas.

For the Diploma in vocal music, the pupil must complete the courses in harmony, theory and history of music, ear training and sight reading, and must also complete the work of the academic course in instrumental music.

## PIANO

Mr. Peterson; Miss Clisby; Miss Burrows.

The study of piano is conducted with a view to balancing more perfectly the training of the mind and the cultivation of technical power. Too often stress is placed upon one or the other, more frequently the latter, to an extreme. Technic is but the means to an end; i. e., the correct interpretation of the masters, and should be so considered.

Special attention is directed from the very beginning to the student's habit of thinking. This is done largely through the method of harmonic analysis and memorizing in an orderly and concentrative manner.

The musical side of the student's personality is brought into action through intelligent and artistic interpretation and its development is materially assisted by his having the opportunity to hear good music, artistically rendered as often as possible.

In technical development, special work is given for the acquisition of finger strength and independence, a correct position of the hand and purity of tone. Since it is now generally believed that the purest and sweetest tones are secured from direct finger action, this is much emphasized throughout the course.

These fundamental ideas are associated with the principle, the understanding of which is so necessary to the successful teacher, that efforts should continually be made to render the study of the piano less irksome and as intensely interesting to the student as it can be made.

### Piano Outline

First Year.	Second Year.	Third Year.
Piano.	Piano.	Piano.
Harmony.	Harmony.	Harmony.
Musical History.	Violin or Voice.	Violin or Voice.
Musical Literature and Analysis.	Ear Training. Theory.	Ensemble Playing.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

### Preparatory Course

Studies from Czerny, Gurlitt, Macdougall, Bach and other composers; sonatinas from Clementi, Kuhlau, Gurlitt, etc.; the easier sonatas of Haydn and Mozart, and the less difficult compositions of Schumann, Grieg, MacDowell, Schubert, Chopin and others.

### Collegiate Course

**First Year.**—Etudes of Heller, Czerny, Foote; selections from the Bach suites and sonatas of Beethoven, Haydn and Mozart; compositions of Mendelssohn, Schubert, Chopin, Schumann, Grieg, MacDowell, etc.

**Second Year.**—Studies from Bach, (inventions and suites), Heller, Czerny, and others; sonatas of Mozart and Beethoven; solos selected from Weber, Chopin, Mendelssohn, Schumann, Grieg, MacDowell, Liszt and others; also some of the easier concertos of Mendelssohn, Reinecke, Weber, Mozart, etc.

(For examination last year, students played a movement from Mendelssohn's Concerto in G Minor, a Bach Fugue and an expression piece selected from some of the composers of the Romantic School.)

**Third Year.**—Studies from Bach (Well Tempered Clavichord), Chopin, Liszt, Foote; sonatas of Schubert, Beethoven, Grieg, Weber, Chopin; solo work of Mendelssohn, Weber, Schumann, Liszt, Rubinstein, Grieg, MacDowell and the modern French, Russian and American composers; concertos of Beethoven, Rubinstein, Chopin, Schumann, Saint Saens, etc.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

**VIOLIN****Mr. Christensen; Miss Smith**

Position, tone production on open strings, most important rudiments of musical theory in general, Hohmann's Violin School, Book 1; duets by Gebauer and Mazas; miscellaneous solos with piano accompaniment.

**Collegiate Course**

**First Year.**—Two octave scales in all major and minor keys; Sevcik, Opus 1, Book 1, Violin Technique; study of the positions, Hohmann, Book IV; studies by Wohlfart, Opus 45, Books I and II; miscellaneous solos with piano accompaniment.

**Second Year.**—Three octave scales in all major and minor keys; Sevcik, Opus 7, Violin Technic, Books I and II; Sevcik's "Four Thousand Bowings;" Kayser's Etudes, Opus 20, Books I and II; Mazas, Opus 36, Book 1, Violin Studies; solos with piano accompaniment by DeBeriot, Wieniawski, Mendelssohn, etc.

**Third Year.**—Sevcik, Opus 7, Books I and II; Sevcik's "Four Thousand Bowings;" Schralieck's Technical Studies; Mazas Studies Opus 36, Book II; etudes by Dont and Kreutzer; solos by Wieniawski, Vieuxtemps, Mendelssohn, Bruch, Godard, etc.; concertos by Viotti, De Beriot, etc.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

**Violin or Violoncello Outline**

<b>First Year.</b>	<b>Second Year.</b>	<b>Third Year.</b>
Violin or Cello.	Violin or Cello.	Violin or Cello.
Harmony.	Harmony.	Harmony.
Piano.	Piano.	Ensemble Playing.
Musical History.	Musical Literature and Analysis.	
	Theory.	
	Ear Training.	

**PIPE ORGAN**

At the present the College has no pipe organ but it is expected that a very fine organ will be installed in the College Auditorium the coming school year, and anyone desiring to take up the study of this department will have the opportunity of taking the full organ course here at State College.

## HARMONY

Mr. Peterson.

In the study of harmony, the older ideas of harmonizing a given melody or figured bass are discarded as far as possible. The student is taught from the beginning to write his own melodies for harmonization, thus, while stimulating his originality and inventive ability, taking from the study of harmony that mechanical and superfluous aspect so often too apparent to the pupil, and firmly establishing its proper place in the study of music.

In the first year (collegiate) the student receives ear training and the rudiments of harmony, including intervals, scales and chord formation, chords and their tonal relations, melody writing and simple harmonization.

In the second year, melody writing is continued, harmonization a little further developed, new chords introduced, etc.

The third year leads to altered chords and modulation, elaboration of melody, imitation, counterpoint, canon, fugues and composition in the easier forms.

This study is generally conducted in classes of four or five, but those who desire quicker advance may secure private lessons at special rates, according to the statement upon another page.

## HISTORY

The classes in the study of musical history are conducted by Miss Clisby. This clearly follows the development of music and musical instruments from the earliest to the present time. This is a subject upon which every musical student should be well grounded, and some knowledge of it is essential in the general educational equipment of everyone who is at all musically inclined. An examination upon this subject must be passed by all students before receiving certificates or diplomas.

## THEORY

The study of theory is conducted by Mr. Peterson. This study includes the principles of acoustics and formation of sound, together with a study of analysis of musical forms; simple songs, forms, arias, ballads, and other vocal forms;



the more simple forms of dance music, leading to the higher forms of the sonatina and sonata, canon, fugue, etc.

This study is also required of all students receiving certificates or diplomas.

### EAR TRAINING

A special class in ear training and sight reading is to be included in the course for the coming year, to be conducted by a capable and experienced teacher. This study will be required of all music students.

### EXPENSES OF STUDENTS

The tuition for regular work throughout the year is listed in the table of fees below and depends upon the instructor, subjects studied, etc.

The terms and prices to the student of the five months' course in Agriculture will be the same as that for the regular semester, as given below.

### FEES

The following fees will be charged a semester for instruction:

#### Prof. Hedge.

##### Voice—

Two half hour lessons per week, major work .....	\$32.00
One half hour lesson per week, minor work .....	18.00

#### Mr. Christensen.

##### Violin, Viola, Cello and Band Instruments—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work .....	17.00

#### Mr. Peterson.

##### Piano—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work .....	17.00

#### Miss Clisby.

##### Piano—

Two half hour lessons per week, major work .....	\$26.00
One half hour lesson per week, minor work .....	15.00

#### Misses Trimble, Burrows, and Smith.

##### Voice, Piano, Pipe Organ, and Violin—

Two half hour lessons per week, major work .....	\$26.00
One half hour lesson per week, minor work .....	15.00

Harmony, history, theory, ear training, sight reading, etc., in classes, free to all students in voice, piano or violin.



Private lessons in harmony may be obtained for the additional fee of \$10.00 a semester. Students desiring private lessons in harmony and studying in more than one department, for example, both voice and piano departments, will be given a discount of \$5.00 a semester to cover the free theoretical work to which they are entitled in each of these departments.

Practice pianos may be used at the following rates a semester:

One hour a day, \$4.00.

Two hours a day, \$7.00.

Three hours a day, \$9.50.

Four hours a day, \$12.00.

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## ART

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Professor Caldwell; Assistant Professor Goddard.

The aim in arranging the subjects in this department has been to offer such work as will correlate with other college courses in becoming a means to a general education.

The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs and with such tools as are necessary for class work.

Two courses of study are offered, the preliminary work in each being the same. One course includes the study of form and color, and the other principles of design and their application in various crafts. A diploma is given students who satisfactorily complete either course. The time necessary to secure a diploma depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course. The course in academic drawing and painting includes drawing from cast and still life, painting and art history, (courses 6, 7, 8, 9, 10, 11, 12, 13). The course in applied design includes a year of drawing, two years of design and handicraft with a year of art history, (courses 4, 5, 6, 7, 8, 9).

Any advanced student wishing to study the technique of

pen and ink will be given individual instruction in that subject.

For Art 1 and 2 see the preparatory department.

3. **Theory of Design.**—One credit; second semester. This subject treats of the principles of design and their practical application in the home.

4-5. **Applied Design.**—Two credits each semester. Four periods a week for the working out of designs in the various crafts of basketry, leather tooling, metalry, jewelry, stenciling and bobbin lace. Students wishing a diploma are required to continue the study of design for a second year and study the principles of the crafts they have not included in their first year's study of applied design.

6. **Art History.**—Two credits; first semester. This course aims to acquaint the student with the styles of historic architecture and with prominent buildings illustrative of each style.

7. **Art History.**—Two credits; second semester. A study of great schools of painting. Reference books in the general library and a collection of photographs in the department furnish material for this course.

8. **Charcoal Drawing.**—Two credits; first semester; elective to students pursuing special work in art. Drawing from simple casts in outline and in light and shade.

10. **Charcoal Drawing.**—Two credits; first or second semester; elective to students pursuing special work in art. Drawing of heads and figures in full light and shade from casts, sketching from pose; prerequisite, Art 8.

11. **Study of Values.**—Two credits; first or second semester; elective to students pursuing special work in art. Value studies in charcoal from still life as preparatory work for painting; prerequisite, Art 1-2.

12-13. **Painting.**—Two credits each semester; elective to students pursuing special work in art; prerequisite, Art 8. Study of color and technic of painting in oil, pastel, and water color from still life and flowers.

14-15. **Drawing.**—Two credits each semester. This course will include object and nature drawing with pencil and colored crayon, for the study of proportion, perspective, light and shade, and pencil technic, thus enabling the student to express the appearance of objects.

**DEPARTMENT OF MILITARY TACTICS AND SCIENCE**

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**Captain Matson, Commandant; Sergeant Loane, Assistant.**

The work of this department is conducted in accordance with War Department Orders promulgated pursuant to Act of Congress, approved June 3, 1916.

Under this Act of Congress military instruction at schools, colleges and universities has taken on an added significance. This work has been made an integral part of the National military policy.

All students taking military training at the various educational institutions throughout the United States are organized into a RESERVE OFFICERS TRAINING CORPS (R. O. T. C.), which is composed of Senior and Junior Units. These units are established by the President of the United States and each consists of not less than 100 physically fit male students, not less than 16 years of age.

South Dakota State College, having fulfilled all requirements of the law, has had established thereat one Senior Unit, (Infantry), of the R. O. T. C.

The primary object of establishing units of the R. O. T. C. is to qualify, by systematic and standard methods of training, students at civil educational institutions for RESERVE OFFICERS. The system of instruction prescribed presents to students a standardized measure of that military training which is necessary in order to prepare them to perform intelligently the duties of commissioned officer in the military forces of the United States, and it enables them to be thus trained with the least practical interference with their civil careers.

All men students below the junior year are required to take military training—an equivalent of three hours per week during the academic year, for which one credit each semester is given. This work is a prerequisite for graduation.

After July 1, 1917, the Federal Government will be prepared to issue to the College, for the use of each member of the R. O. T. C. the following articles of uniform: 1—breeches, woolen, olive drab, pairs; 1—cap, olive drab; 1—coat, woolen,

olive drab; 1—leggings, canvas, pairs; 1—cap and collar ornament, set; 1—shoes, russet, pairs.

For each member of the R. O. T. C. who agrees in writing to participate in such camps of instruction as the Secretary of War shall prescribe, there will be issued the following additional articles of uniform: 1—hat, service; 1—cord, hat; 2—breeches, cotton, olive drab, pairs; 2—shirts, flannel, olive drab.

There will also be issued the latest model arms, equipments, animals and means of transportation, in so far as the supply and appropriations permit.

It is the desire of the War Department to have as many students as possible continue the military instruction throughout the entire four years of their academic course. Hence to all juniors and seniors, who desire to continue the work, who will agree in writing to continue the work until graduation, to take five hours a week, and to participate in two camps of instruction, the Federal government will pay commutation of subsistence at the rate of about 30 cents per day or approximately \$9.00 per month to each such student during his junior and senior years.

Having completed the four years' course in military training and participated in at least two camps of instruction, such students are then eligible to be commissioned in the Officers Reserve Corps, and, if they so desire, for appointment as temporary Second Lieutenants in the Regular Army for a period of six months, with pay of \$100.00 per month and other allowances of that grade.

The OFFICERS RESERVE CORPS is composed of citizens of the United States who have had military training and who, upon examination, shall be found physically, mentally, and morally qualified. The President alone is authorized to commission such men as RESERVE OFFICERS in all grades up to and including that of Major.

The purpose of this OFFICERS RESERVE CORPS is to secure a reserve of officers available for service as temporary officers in the Regular Army, as officers of the Quartermaster Corps and other staff corps and departments, as officers of recruiting rendezvous and depots, and as officers of volunteers.



Reserve officers must agree to serve as such for ten years. They are not subject to call for service in time of peace except, that, for purposes of instruction, they may be called upon for service with troops or at field exercises for periods not to exceed 15 days in any one calendar year, and while so serving they shall receive the pay and allowances of an officer of the same grade in the Regular Army. Reserve officers are subject to call for duty in times of threatened or actual hostilities, and while so serving they shall receive the pay and allowances of an officer of the same grade in the Regular Army.

Military training during one's college course should be looked forward to with pleasure and not with dread. It can be made to produce individual benefit of lasting value. Any young man who has instilled in him the principles of team-work, subordination and discipline, is far better equipped to meet the problems of every day life than he is without them. Everyone who is fit to be a citizen of a free country ought to be willing to serve the country when needed and hence every young man should welcome an opportunity to learn something of military training during his college course.

The following courses of instruction in Military Science and Tactics have been prescribed in orders from the War Department for Infantry Units of the Senior Division:

#### **Freshman Year.**

1. **Military Art.**—Three hours a week (counting 14 units.)

(a) **Practical.**—Weight 10. Physical drill (Manual of Physical Training—Koehler); infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) **Theoretical.**—Weight 4. Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

2. **Military Art.**—Three hours a week (counting 14 units.)

(a) **Practical.**—Weight 10. Physical drill (Manual of Physical Training—Koehler); infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry



Drill Regulations); bayonet combat; intrenchments (584-595 Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) **Theoretical.**—Weight 4. Lectures, general military policy as shown by military history of the United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations to include School of the Company; camp sanitation for small commands.

#### Sophomore Year.

3. **Military Art.**—Three hours a week (counting 14 units.)

(a) **Practical.**—Weight 10. The same as course 2 (a). Combat firing, if practicable, but collective firing should be attempted indoor ranges by devices now in vogue at United States Disciplinary Barracks.

(b) **Theoretical.**—Weight 4. United States Infantry Drill Regulations, to include School of Battalion and Combat (350-362); Small Arms Firing Regulations; lectures as in (b) course 2; map reading; camp sanitation and camping expedients.

4. **Military Art.**—Three hours a week (counting 14 units.)

(a) **Practical.**—Weight 10. The same as course 2 (a), signaling; semaphore and flag; first-aid; work with sand table by constructing to scale intrenchments, field works, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) **Theoretical.**—Weight 4. Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages, and camp expedients); marches and camps (Field Service Regulations and Infantry drill regulations.)

#### Junior Year.

5. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching.

(b) **Theoretical.**—Weight 11. Minor tactics; field orders (studies in minor tactics, United States School of the Line); map maneuvers. Weight 8. Company administration, general principles (papers and returns.) Weight 1. Military history. Weight 2.

6. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Same as (a) course 5. Military sketching.

(b) **Theoretical.**—Weight 11. Minor tactics (continued); map maneuvers. Weight 8. Elements of International Law. Weight 2.

Property accountability; method of obtaining supplies and equipment (Army Regulations.) Weight 1.

#### Senior Year.

7. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Duties consistent with the rank as cadet officers or non-commissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) **Theoretical.**—Weight 11. Tactical problems, small forces, all arms combined; map maneuvers; court martial proceedings (Manual for Courts Martial) International relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation and treaties. Lectures: Psychology of war and kindred subjects. General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed five lectures.)

8. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Same as course 7 (a).

(b) **Theoretical.**—Weight 11. Tactical problems (continued); map maneuvers. Rifle in war. Lectures on military history and policy.

It is presumed that each member of the Reserve Officers Training Corps during his academic course has taken one course or equivalent credit in either French, or German, or Spanish.

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## DEPARTMENT OF COMMERCE

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### Professor Schlatter.

The department of commerce offers two courses of study:

(1). The Secretarial course for students who have completed a high school course of two or more years. The work of the course may be counted towards the completion of the entrance requirements to the freshman year of the college, under certain restrictions imposed by the committee on entrance requirements—and also depending upon the additional work that has been done by the student. However, it frequently happens that such students have no intention of pursuing a regular collegiate course of study, but are obliged by force of circumstances to take a one-year's business course preparatory to office work. These students welcome the opportunity of securing a commercial education in a college atmosphere.

(2). The regular commercial course combines preparatory subjects with business branches and covers a period of four years. This course is valuable to the student who desires to obtain a broad general knowledge with his commercial training. The student also gets regular credit for the work toward admission to the freshman year of college, in case he wishes to continue his education. Many students, in fact, take the business subjects in order to learn some method of earning their future college expenses.

All stenographic courses are so arranged that students are given considerable actual office practice during the second semester just before completing the course. The idea is to train the student for immediate service in office work, and to minimize the customary bungling of the beginner.

The demand for our graduates far exceeds the supply. Hardly a week passes that we are not asked to recommend some young man or woman for office work.

Brookings is now a regular point for holding of Civil Service examinations. Students who desire to take the examinations are encouraged to do so and are given all the preparation possible.

Those who have not completed the equivalent of at least three years of a high school course should follow the course in commercial science as outlined in the schedule of the preparatory department. Shorthand students are required to have had a preliminary English training of about two years.

Under certain restrictions, collegiate students are permitted to take electives in Business Law, Theory of Money and Banking, Economic Geography, Shorthand, Accounting, and Business Principles.

### THE SECRETARIAL COURSE

#### First Semester

	Credits
Business Law, Commerce 9 .....	3
English, English 5, 7, or 9 .....	3 or 4
Shorthand, Commerce 5 .....	5
Typewriting, Commerce 6 .....	5
Accounting, Commerce 11 .....	2

## Second Semester

	Credits
English, English 6, 8, or 10 .....	3
Shorthand, Commerce 7 .....	5
Typewriting, Commerce 8 .....	3
Secretary Practice, Commerce 14 .....	5
Money & Banking, Commerce 10 .....	3
or	
Business Principles, Commerce 12 .....	2
or	
Economic Geography, Commerce 13 .....	3

## THE COMMERCIAL COURSE

The following subjects are offered in the regular-four-years course in commercial science. For complete schedule see outline of preparatory course.

1. **Business Methods and Penmanship.**—Three credits; first semester. A practical course designed to teach the student to write creditable business forms, and to give him an elementary knowledge of practical business methods. Particular attention is given to penmanship.

2. **Commercial Geography.**—Three credits; second semester; Study of industry and commerce, local, national, and international. This course will be illustrated by the use of a commercial museum now being collected. The student will be required to learn the use of government reports and other sources of information in collecting data.

3. **Bookkeeping.**—Three credits; first semester. Single and double entry studied as in actual business; the aim being to acquaint the student with the fundamental principles of bookkeeping. Students who are deficient in penmanship will be required to take course 1.

4. **Bookkeeping.**—Three credits; second semester. Advanced bookkeeping, affording practice with the more complex books and forms used in modern offices. By the use of separate price lists, each student will be obliged to do independent study and thinking. In this course the student becomes familiar with the uses of various kinds of commercial paper and office practice.

5. **Shorthand.**—Five credits; first semester. In this course the student masters the theory of shorthand; dictation of simple business letters to develop facility in handling writing material; drills on principles, characters and word-signs. Gregg shorthand is taught. Nothing but the very best work is accepted, for it is time wasted to prepare second and third rate stenographers for office work.



6-8. **Typewriting.**—Two credits each semester. Graded exercises to learn machine by touch method; care of machine; correspondence and legal forms; manifolding and mimeographing; billing and tabulating.

7. **Shorthand.**—Five credits; second semester. Dictation of business letters and general matter to develop speed; legal forms; civil service matter. The student is not allowed to develop speed carelessly, at the expense of legibility. With this course, the student makes a study of commercial correspondence and the most approved forms in letter composition. All dictated matter is transcribed on the typewriter.

9. **Business Law.**—Three credits; first semester; three recitations a week. Designed to acquaint the student with the fundamental principles of business law, supplemented with a study of actual cases illustrative of these principles. A topical analysis of contracts; negotiable paper; agency; sale of chattels; bailment.

10. **Money and Banking.**—Three credits; second semester. Alternate with commerce 13. A theoretical and practical study of the history of money; nature and uses of money; classification of banks; bank circulation; deposits and loans; collection; reserves; legal regulations; clearing houses; loan and trust companies.

11. **General Accounting.**—Two credits; first semester. It is the purpose of this course to acquaint the student with the different forms of industrial organizations, and the nature and analysis of their business transactions. The theory of the exchange of values and that of debits and credits are studied. Attention is given to the correct classification of business interests into their proper accounts with special reference to their relations in the different kinds of statements.

12. **Business Principles.**—Two credits; second semester. Business principles, organization and methods are discussed in untechnical language, in such a manner as to make the work profitable to the general student as well as to the student of business. Topics discussed are: economic basis of business; types of business organization; interior organization; principles of management; the entrepreneur; and efficient business methods.

13. **Economic Geography.**—Three credits; second semester; alternates with Money and Banking; will be given in 1916-17. A practical study of the geography of production. The following topics are studied as thoroly as possible in the limited time given to this subject: Regions of production and consumption of grains; fruits; sugar; tea; coffee; and cocoa; cotton; wool; beef and dairy products; swine; fisheries; forest; coal; petroleum; iron and steel. Also some time is given to the study of manufacturing industries, origin and basis of trade, ocean and land trade routes, commercial centers, and types of commercial nations. This subject is especially



desirable to those students who expect some time to be able to judge trade and market conditions intelligently.

14. **Secretary Practice.**—Five Credits; second semester. Afternoon practice with college offices or business firms in town. Also a great deal of practice in taking letters, etc., and transcribing them on the typewriter is given in the class room. The practice will be of great value in giving preliminary experience, and will remove the fear of entering the first regular office work upon graduation.

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## PREPARATORY DEPARTMENT

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### Professor Forsee.

For the benefit of students who do not have high school advantages a preparatory department is maintained. This course, the work of which extends over four years, contains certain required subjects that are considered necessary to a liberal education. The remaining work may be chosen from a large list of elective subjects. The student who pursues the course may thus secure a good preparation for entering upon more advanced work or a training for practical life.

The course conforms to the admission requirements as far as the conditions in the College permit. Students will be admitted to the college courses upon the completion of the required subjects and an additional amount of work chosen from the elective subjects to make fifteen units, a unit being five hours a week throughout the year. This requires about three hours of elective work a week in addition to the required subjects during the four years. In addition to the requirements outlined below, all students will be required to attend and take part in literary society work, for which they will receive reasonable credit.

### PREPARATORY COURSE

#### First Year

##### First Semester—

	Credits
English Composition, English 1 .....	5
Arithmetic (Including Metric System), Mathematics 1. . .	5
Physiography .....	5

## Credits

Business Correspondence and Penmanship, Commerce 1 ..

or

Freehand Drawing, Art 1 ..... 3

Military Tactics ..... 1

Elective ..... 3

**Second Semester—**

English Composition, English 2 ..... 5

Beg. Algebra, Mathematics 2 ..... 5

Civics, History 1 ..... 4

Commerce and Industry, Commerce 2 ..... 3

or

Freehand Drawing, Art 2 ..... 3

Military Tactics ..... 1

Elective ..... 3

For list of preparatory electives, see the following pages.

**Second Year****First Semester—**

English Composition and Rhetoric, English 3 ..... 5

Algebra, Mathematics 3 ..... 5

Elementary Biology, Entomology 1 ..... 5

Military Tactics ..... 1

Elective ..... 3

**Second Semester—**

English Composition and Rhetoric, English 4 ..... 5

Algebra, Mathematics 4 ..... 5

Elementary Biology, Entomology 2 ..... 5

Military Tactics ..... 1

Elective ..... 3

For list of preparatory electives, see the following pages.

**Third Year****First Semester—**

American Literature, English 5 ..... 4

Plane Geometry, Mathematics 5 ..... 4

German, German Pr. 1 ..... 5

\*Greek History, History 3 ..... 3

Military Tactics ..... 1

Elective ..... 3

**Second Semester—**

American Literature, English 6 ..... 4

Plane Geometry, Mathematics 6 ..... 4

German, German Pr. 2 ..... 5

Roman History, History 4 ..... 3

Military Tactics ..... 1

Elective ..... 3

For list of preparatory electives, see the following pages.

Credits

**Fourth Year****First Semester—**

English Literature, English 7 .....	3
Elementary Physics, Physics 1 .....	5
German, German Pr. 3 .....	5
American History, History 5 .....	3
Military Tactics .....	1
Elective .....	3

**Second Semester—**

English Literature, English 8 .....	3
Elementary Physics, Physics 2 .....	5
German, German Pr. 4 .....	5
American History, History 6 .....	3
Military Tactics .....	1
Elective .....	1

For list of preparatory electives, see the following pages.

\*Students taking Shorthand will be allowed to substitute type-writing for Greek History and Roman History, or for American History.

**PREPARATORY ELECTIVES****First and Second Years****First Semester—**

Freehand Drawing, Art 1 .....	3
Carpentry, Mechanical Engineering 1 .....	3
Elementary Agriculture, Agriculture 1 .....	3
Cooking, Home Economics 1 .....	3
Bookkeeping, Commerce 4 .....	3
Business Correspondence, Commerce 1 .....	3
Typewriting, Commerce 6 .....	2

**Second Semester—**

Freehand Drawing, Art 2 .....	3
Forging, Mechanical Engineering 2 .....	3
Elementary Agriculture, Agriculture 2 .....	3
Sewing, Home Economics 2 .....	3
Bookkeeping, Commerce 4 .....	3
Typewriting, Commerce 8 .....	2
Commerce and Industry, Commerce 2 .....	3

**Third and Fourth Years****First Semester—**

Freehand Drawing, Art 1 .....	3
Cooking, Home Economics 2 .....	3
Carpentry, Mechanical Engineering 1 .....	3
*Shorthand, Commerce 5 .....	5
Elementary Agriculture, Agriculture 1 .....	3

## Credits

Typewriting, Commerce 6 .....	2
Elementary Physiology, Zoology 1. ....	5
Mechanical Drawing, Mechanical Engineering 5 .....	3
Business Law, Commerce 9 .....	3
Bookkeeping, Commerce 3 .....	3
Solid Geometry, Mathematics 7 .....	3

## Second Semester—

Freehand Drawing, Art 2 .....	3
Sewing, Home Economics 1 .....	3
Bookkeeping, Commerce 4 .....	3
Forging, Mechanical Engineering 2 .....	3
Mechanical Drawing, Mechanical Engineering 5 .....	3
Typewriting, Commerce 8 .....	2
*Shorthand, Commerce 7 .....	5
Elementary Agriculture, Agriculture 2 .....	3
Elementary Physiology, Zoology 2 .....	3
Money and Banking, Commerce 10 .....	3

\*Students taking Shorthand will be allowed to substitute typewriting for Greek History and Roman History, or for American History.

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## SCHOOL OF AGRICULTURE

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### Professor Stivers.

The School of Agriculture has for its specific purpose the training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farm and in the homes to help the parents during the busy season of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

While the subjects of study consist primarily of those that relate to farming and household economy, they include also such subjects as are usually given in a regular high school course. For example, English, mathematics, history, civics, chemistry, physics and biology. The technical topics include

studies in soil, plants and crops, domestic animals, feeds and feeding, cooking and sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Demonstrations are given in the class rooms, laboratories, kitchen and sewing-rooms, barns, green-houses, orchards and fields.

The School of Agriculture welcomes earnest and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

The tuition is six dollars for the year, with a small fee for each laboratory in which work is taken.

### COURSES OF STUDY

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work.

#### THE FOUR-YEARS COURSE FOR YOUNG MEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of times a week, "a" meaning class work, "b" laboratory work.

##### First Year

Penmanship and Spelling .....	a 2
English .....	a 4
Arithmetic or Algebra .....	a 4
Poultry Culture .....	a 2
Farm Crops .....	a 3, b 2
Stock Judging .....	b 2
Horticulture .....	b 1
Carpentry .....	b 3
Lectures on Science .....	a 2
Military Drill .....	3

##### Second Year

English .....	a 4
Algebra or Advanced Arithmetic .....	a 4
Farm Accounts .....	b 1



Plant and Animal Life .....	a 5
Dairying .....	a 1, b 2
Breeds and Breeding .....	a 2, b 1
Horticulture .....	b 1
Blacksmithing .....	b 3
Military Drill .....	3

### Third Year

English .....	a 4
Plane Geometry, Algebra or Advanced Blacksmithing .....	a 4
Civics .....	a 3
Elementary Chemistry .....	a and b 4
Farm Machinery .....	a 2
Entomology .....	a 1, b 1
Stock Feeding .....	a 5
Military Drill .....	3

### Fourth Year

English .....	a 4
History (including lectures on Cooperation ) .....	a 4
Geometry or Elementary Farm Management .....	a 4
Elementary Physics .....	a 2, b 2
Physiology .....	a 2
Cement Construction .....	b 2
Veterinary Science .....	a 3
Soils .....	b 3
Military Drill .....	3

## THE FOUR-YEARS COURSE FOR YOUNG WOMEN

### First Year

Penmanship and Spelling .....	a 2
English .....	a 4
Arithmetic or Algebra .....	a 4
Craft .....	b 2
Poultry Culture .....	a 2
Cooking I .....	b 3
Sewing I .....	b 3
Dairying .....	b 1
Horticulture .....	b 1
Lectures on Science .....	a 2
Art Needlework (Elective) .....	b 1
Physical Training .....	2

### Second Year

English .....	a 4
Algebra or Arithmetic .....	a 4
Household Accounts .....	b 1

Plant and Animal Life .....	a 3, b 2
Cooking II .....	b 3
Household Management .....	a 1
Art Needlework (Elective) .....	b 1
Freehand Drawing .....	b 1
Physical Training .....	2
Sewing II .....	b 3

### Third Year

English .....	a 4
Plane Geometry or Algebra, or Rural School Domestic Science ...	a 4
Civics .....	a 3
Elementary Chemistry .....	a and b 4
Sewing III .....	b 2
The House .....	a 2
Craft .....	b 1
Art Needlework (Elective) .....	b 1
Physical Training .....	2
Cooking III .....	b 2

### Fourth Year

English .....	a 4
History (including lectures or Cooperation ) .....	a 4
Geometry .....	a 4
Elementary Physics .....	a 2, b 2
Physiology .....	a 2
Sewing IV .....	b 2
Cooking IV .....	b 2
Home Nursing .....	a 2
Art Needlework (Elective) .....	b 1
Physical Training .....	2
Millinery .....	b 1

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## THE SUMMER SCHOOL

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### Professor Stivers, Director

The work of the Summer Session is planned especially for those who desire training along the industrial lines—Agriculture, Manual Training, Home Economics and allied subjects, either to secure college credits or to prepare for teaching.

The vocational field offers excellent opportunity to teachers. Salaries in this line of work are especially good and the demand for teachers exceeds the supply.

State College with her laboratories, shops, experimental plots and live stock offers many advantages to students who desire to fit themselves to teach vocational subjects.

In addition to members of the regular College staff a number of special instructors and lecturers are employed during the session.

The Summer Session for 1917 will begin June 11th and continue six weeks. The following courses will be offered:

**Agriculture.**—Animal Husbandry, Breeding Livestock, Stock Judging, Livestock Management, Farm Dairying, Soils and Crops.

**Home Economics.**—Cookery, Sewing, Dressmaking, Millinery, Serving, Handwork, Basketry, Etc.

**Manual Training.**—Woodworking, Joinery and Cabinet Construction, Finishing, Mechanical Drawing, and special courses for rural school teachers.

**General Sciences.**—Elementary Inorganic Chemistry; Elements of Physics; Civics and Rural Social Science, (3 courses); English and American Literature, (4 courses); Nature Study, Evolution and Sanitation, (3 courses).

**Education.**—Educational Psychology, Principles of Teaching, History of Education, and Recent Social Movements in Education.

**Specials.**—Primary Methods, Grammar, History, Civics and Geography.

**Athletics.**—Courses in Coaching Football, Basketball, and Track.

The 1917 Summer Session will begin June 11th. In connection with the Session a Joint Institute of Miner, Moody, Hamlin, Kingsbury, Codington and Brookings counties will be held, beginning June 11th and closing June 22nd. Those wishing detailed information concerning the Summer Session or Joint Institute should write to the President for the Summer School Bulletin.

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## Short Industrial Courses

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### THE FARM AND HOME COURSE

December 31 to January 6.

This course, which will be given during the Christmas vacation, will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects. Write to the College for further information.

**THE THREE MONTHS' CREAMERY COURSE.****January 8 to March 15.**

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending College, as by this means it is found that much greater benefit is derived from the work at the school.

The more general application of scientific principles to the manufacturing industries as well, as the increasing competition on all sides demands a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the "reason why" for many of our daily operations. The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from \$50 to \$125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered:

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and accounting.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

The tuition is four dollars for the three months' term with a small additional fee for laboratory expenses.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

### COURSE IN FARM MECHANICS

January 8 to May 31

Modern agricultural methods have introduced the steam and gas engine, as a substitute for animal power, in such a marked degree, that the consequent growing demand for traction engineers has led the College to arrange a five months' course for the special training of such engineers. Extreme care has been taken to offer only such work as will prove valuable to the man running the traction engine and other machinery. A relatively large amount of shop work and engine practice is introduced.

For the work in engine practice several of the most modern types of both steam and gas traction engines are available. Enough time is devoted to this part of the work to make each student thoroughly familiar with all of the engines, and able to operate them satisfactorily in actual practice. The engine practice work generally starts as soon as the frost is out of the ground, or about April 10th, and continues to the end of the term.

A series of lectures on the gas engine, with particular reference to its application to the tractor and the automobile, is given.

A proper proportion of recitations in closely allied subjects is also included in this course.

The tuition is eight dollars for the entire course with a small amount extra for laboratory fees.

Upon the satisfactory completion of the work the student is given a certificate which is virtually the same as a license to run an engine in this state.



Students who desire to take this course are expected to pass a satisfactory examination in arithmetic, to read intelligently and to show such general elementary training as will indicate that they are able to understand the subjects embraced in this course.

The work offered is as follows:

	periods per week
Arithmetic .....	5
Heat Engines and Elementary Physics .....	5
Stock Judging .....	2 ½
Steam and Gas Engine Lectures .....	2 ½
Forging .....	2 ½
Mechanical Drawing .....	2 ½
Steam and Gas Engine Practice .....	2

# Agricultural Experiment Station

## Station Staff

T. W. Dwight	Member Regents' Committee for the College
J. W. Campbell	Member Regents' Committee for the College
Ellwood C. Perisho	President of the College
James W. Wilson	Director and Animal Husbandman
Niels E. Hansen	Vice Director and Horticulturist
James H. Shepard	Chemist
Christian Larsen	Dairy Husbandman
Albert N. Hume	Agronomist and Superintendent of Sub-Stations
H. C. Severin	Entomologist
Joseph Gladden Hutton	Associate Agronomist
Manley Champlin	Assistant Agronomist and Collaborator with U. S.

### Department of Agriculture.

Howard Loomis	Agronomy Analyst
Matthew Fowlds	Assistant in Crops
H. W. Gregory	Assistant Dairy Husbandman
Edwin H. Hungerford	Dairy Analyst
Vern R. Jones	Assistant Dairy Husbandman and Dairy Bacteriologist
Harry Rilling	Assistant Agronomist
Arthur Lynch	Assistant Dairy Husbandman
R. C. Sherwood	Assistant Chemist
Fred C. Stoltzenberg	Assistant Horticulturist
R. A. Larson	Secretary

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state receives annually \$30,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely; agronomy, animal husbandry, dairy, horticulture and chemistry.

Each of these divisions is in charge of an expert who is also professor of the same subject in the College.

About sixty acres of the college farm are set aside for experiments in crop rotation and testing varieties of grains.

Another tract of sixty acres is utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the state with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to residents of the state. Inquiries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 22,000 names.

All communications to this department should be addressed to the Director.

# Agricultural Extension Division

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## Extension Staff

Ellwood C. Perisho .....	President
Gordon W. Randlett .....	Director
Nannie Lineburg .....	Secretary
H. E. Dawes .....	Assistant Superintendent of Short Courses
W. M. Mair .....	Superintendent Boys' and Girls' Clubs
Guy E. Morrison .....	Specialist in Live Stock Improvement
W. A. Ostrander .....	Farm Management Demonstrator
T. A. Meehan .....	Specialist in Dairying (Manufacture)
Frank E. McCall .....	Specialist in Horticulture
Ralph L. Patty .....	Specialist in Agricultural Engineering
Dilla E. Wimple, Specialist in Home Economics (Food Conservation)	
Gertrude Erickson, Specialist in Home Economics (Food Preparation)	
Agnes Morton .....	Assistant Club Leader
Geo. Gilbertson .....	Specialist in Insect Control
J. T. E. Dinwoodie .....	Specialist in Animal Disease Control
J. G. Hutton .....	Specialist in Soils
Manley Champlin .....	Specialist in Field Crops
W. E. Lyman .....	Agent, Lawrence County
Ralph E. Johnston .....	Agent, Fall River County
Dick Lewallen .....	Agent, Lyman and Jones Counties
E. C. Bird .....	Agent, Douglas County
A. W. Palm .....	Agent, Codington County
Leslie V. Ausman .....	Agent, Clark County
E. W. Hall .....	Agent, Spink County
O. P. Drake .....	Agent, Beadle County
A. R. Wije .....	Agent, Kingsbury County
W. W. Underwood .....	Agent, Hughes County
Vey J. Valentine .....	Agent, Stanley County
R. O. Swanson .....	Agent, Miner County
Harry Rilling .....	Agent, Jerauld County

In 1914 Congress passed the Smith-Lever Act, appropriating a considerable sum of money to the various states in which Agricultural Extension work including Home Economics should be established. The state of South Dakota in its last Legislative Session met the requirements of the Federal Act by appropriating \$68,000 for the next biennial period to be used in Agricultural Extension including county agent work. Activities are carried on under the project plan as follows:

1. County Agent Project.
2. Short Course Project.

3. Boy and Girl Club Project.
4. Dairying (Manufacture) Project.
5. Farm Management Project.
6. Live Stock Project.
7. Horticulture Project.
8. Agricultural Engineering Project.
9. Animal Disease Control Project.
10. Home Economics Project.
11. Grasshopper Control Project.
12. Soil Fertility Project.
13. Field Crop Improvement Project.

The following projects will be added as soon as funds permit and suitable specialists found: Marketing, Dairying (Production), and Plant Disease Control.

Any county in the state may secure the benefits of Federal and State appropriations in the following manner: It shall be lawful for 50 or more freeholders residing in at least one-third of the congressional townships of the county, to organize and incorporate an Agricultural Extension Association. The members of the association shall pay a membership fee of \$1.00 and shall file articles of incorporation with the Secretary of State, and elect a board of directors. The Directors may secure an appropriation from the County Board of Commissioners which may be deposited with the Treasurer of State and be augmented from state funds by 60 per cent. of the amount so deposited. The county is then in a position to ask for Federal assistance.

The state law provides for the conducting of demonstration courses in Agriculture and Home Economics in all counties not employing a county agent. This work is under the immediate supervision of the Short Course Superintendent and is conducted during the late fall and winter months. It takes the place of Farmers' Institutes of former years.

Boy and Girl Club Work is carried on usually in co-operation with the county agent or the county superintendent of schools. This work is in charge of a State Club Leader and an Assistant Leader. It consists in the organization of boys and girls between the ages of 10 and 18 years into clubs for the purpose of corn growing, economical pig raising, gardening and canning, bread and garment making, and so forth.

Workers in other projects are detailed to the various



communities where their special services may be needed. With the exception of the County Agents all other extension wrokers are employed and their work administered directly by the Extension Division of the State College.

Communities desiring demonstrations in any of the lines suggested by the list of projects should write to the Director.

# College Alumni

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## ALUMNI ASSOCIATION

I. B. Johnson, '03	President
A. C. Dillman, '07	First Vice-President
Manley Champlin, '09	Second Vice-President
Cleveland Abbott, '16	Third Vice-President
H. B. Mathews, '92	Secretary and Treasurer

## Class of 1886

### BACHELOR OF SCIENCE

Sayler, Marcus A.	Fruit Grower, Orland, Cal.
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## Class of 1888

### BACHELOR OF SCIENCE

Aldrich, John M.	With U. S. Bureau of Entomology, 316 S. Grant St., West, Lafayette, Ind.
Lawrence, Philip A.	Attorney, Fargo, N. D.
Wellman, Lulah (Hewes)	Lakewood, N. Y.

## Class of 1889

### BACHELOR OF SCIENCE

Boswell, Katie (Arnold)	Kennebec
Cranston, Mary (Crane)	04303 Lincoln St., Spokane, Wash.
Cross, Alvah G.	
Eno, Durell G.	Merchant, Platte
Grady, Francis A.	Attorney, Crookston, Minn.
Haber, Sarah (Cunningham)	1015 Grand Blvd., Spokane, Wash.
Korstad, Hans	Rural Mail Carrier, Brookings
Larson, Lars K.	Bank Cashier, Dell Rapids
Lawshe, Grace (Brooke)	Art Dept. of Woman's Work Exchange, 710 Marshall Ave., St. Paul, Minn.
McKenney, Duston W.	Supervisor Manual Training, 302 Lewis Ave., Billings, Mont.
McLouth, Lewis C.	Gen. Mgr. Miniature Sales Co. 1228 Chamber Com., Detroit, Mich.
Mork, Albert A.	Farmer, Grelland, N. D.
Roe, Ellen (Aldrich)	Died Dec. 8th, 1897, at Helena, Mont.
Rogers, Edmund	Machinist, 104 Eleventh St., Milwaukee, Wis.
Ross, Carrie (Orcutt)	518 W. Third St., Northfield, Minn.
Ross, Abbie (Wesche)	Webb, Ia.

Wardall, Anna (Scott) .....  
 .....Osteopath, 3201 Forty-first Ave., S. W., Seattle, Wash.

### Class of 1890

### BACHELOR OF SCIENCE

Allen, William C. ....Died in Chicago  
 Day, John M. ....Farmer, Ekalaka, Mont.  
 Duffey, Maggie (Irish) .....1227 Childress Ave., St. Louis, Mo.  
 Egeburg, Hildus .....Farmer, Brookings  
 Haasarud, Ole H. ....Farmer, Bratsburg, Minn.  
 Harkins, Lilla A., Prof. of Dom. Science, 613 S. Grand Ave....  
 ..... Montana Agricultural College, Bozeman  
 Hopkins, Cyril G., Prof. of Agronomy, Chemist and Vice Director  
 ....of Exp. Sta., U. of Illinois, 1001 S. Wright St., Champaign  
 Jenkins, John C. ....Attorney, 815 Spaulding Bldg., Portland, Ore.  
 Kenyon, Arthur H. ....Lawyer, 1315 Mallon Ave., Spokane, Wash.  
 Pyne, Estel W. ....Capitalist, 633 S. Union Ave., Los Angeles, Cal.  
 Roe, Guy W. ....State Mgr. Union Fibre Co., Seattle, Wash.  
 Stoner, Minna A. ....Home Economics Lecturer, Woonsocket  
 Wardall, Norman M. ....2215 41st Ave., S. W., Seattle, Wash.

### Class of 1891

### MASTER OF SCIENCE

Aldrich John M., With U. S. Bureau of Entomology .....  
 .....Lafayette, Ind., 316 S. Grant St., West Lafayette, Ind.

### BACHELOR OF SCIENCE

Aldrich, Irwin D., Editor and Sec. State Board of Regents, Big Stone  
 Bell, William D. ....  
 .....Mgr. Am. Motorists Ass'n, Upham Bldg., St. Paul, Minn.  
 Bentley, Wm. S. ....Physician, Rapid City  
 Chamberlain, Jennie (Spooner) .....  
 .....Physician, 813 4th Ave., Detroit, Mich.  
 Crane, Austin B., Prof. of Math. and Civil Eng., Spokane Univ.  
 .....04303 Lincoln St., Spokane  
 Davis, Homer .....Physician, Genoa, Neb.  
 Dillon, Willis C. ....  
 Doughty, Hettie (Dibble) .....Beresford  
 Frick, Mary (Magaw) .....903 W. Zumbro St., Rochester, Minn.  
 Hann, Jay B. ....Photographer, Bellingham, Wash.  
 Houston, Grant .....Physician, 201 W. Chicago St., Joliet, Ill.  
 Irish, Henry C. ....Horticulturist, 1227 Childress Ave., St. Louis, Mo.  
 Lewis, Perry .....Inventor, 101 E. Cherry St., Mankato, Minn.  
 Robinson, Alice (Haberlein), 1710 Arlington Ave., Los Angeles, Cal.  
 Shannon, Fanny (Fourt) .....Fairfield, Iowa  
 Solberg, Halvor C. ....Prof. Steam and Mechanical Eng., S. D. S. C.  
 Updyke, Nora (Bacon) .....2211 Elizabeth St., Pueblo, Colo.

Valleau, Vinal B. . . . .Moving Picture Theaters, Albert Lea, Minn.  
 West, Hugh H. . . . .Physician, Spurling Bldg., Elgin, Ill.  
 Wolgemuth, Lee E. . . . .Real Estate, Hamilton, Mont.

### Class of 1892

#### BACHELOR OF SCIENCE

Austin, Steven E., . . . . .Mechanical Engineer, Chicago  
 Davis, Samuel H. . . . .Farmer, Beaverton, Ore.  
 Griffiths, David, Asst. Agronomist . . . . .  
 . . . . .Dept. of Agriculture, Tacoma Park, Washington, D. C.  
 Hamlin, John R., Jr. . . . .Merchant, Hawthorne, Cal.  
 Harding, Albert S., Prof. of History & Political Science, S. D. S. C.  
 Hatfield, Ira A. . . . .Died Feb. 8th, 1914, at Lincoln, Neb.  
 Keeney, Emma (Ferris) . . . . .Springfield, Ore.  
 McAndrew, James E. . . . .Lawyer, 808 Realty Blk., Spokane, Wash.  
 McLouth, Ida B. . . . .Died Aug. 27, 1899, at Short Beach, Conn.  
 Madden, Marguerite (Akin) . . . . .Brookings  
 Mathews, Hubert B. . . . .Prof. of Physics, S. D. S. C.  
 Plocker, Eva (Mathews) . . . . .Brookings  
 Schlosser, Thomas F. . . . .Clergyman, Carleton, Ore.  
 Sloan, Nettie (Torrence) . . . . .Redlands, Cal.  
 Snell, Effie (Clark), 400 E. 14th St., University Place, Lincoln, Neb.  
 Whitten, John C. . . . .Prof. of Hort., U. of Missouri, Columbia  
 Winegar, Albert J. . . . .Life Insurance, Box 425, Beloit, Wis.

### Class of 1893

#### MASTER OF SCIENCE

Griffiths, David, Asst. Agronomist . . . . .  
 . . . . .Dept. of Agriculture, Tacoma Park, Washington, D. C.

#### BACHELOR OF SCIENCE

Bates, Edmund T. . . . .Farmer, Wyoming, Iowa  
 Beck, Milton . . . . .Engineer, Monroe, Mich.  
 Edgerton, Wm. M. . . . .Physician, 2102 Dayton Ave., St. Paul, Minn.  
 McLouth, Benjamin F., Ins. Agent . . . . .  
 . . . . .L. A. Investment Bldg., Los Angeles, Cal.  
 Robertson, Ada N. . . . .Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec.  
 . . . . .for China, Care Y. M. C. A., 124 E. 28th St., New York, N. Y.  
 Schoppe, W. J. A. . . . .Farmer, Groton

### Class of 1894

#### MASTER OF SCIENCE

Plocker, Eva (Mathews) . . . . .Brookings  
 Wolgemuth, Lee E. . . . .Real Estate, Hamilton, Mont.

**BACHELOR OF SCIENCE**

Brown, Cyrus O. ....	Attorney, Douglas, Wyo.
Brown, James A. ....	Attorney, 816 Sec. Mut. Bldg., Lincoln, Neb.
Dibble, Hattie (Stow) ....	College Station, Pullman, Wn.
Hopkins, Mrs. C. G. ....	1001 S. Wright St., Champaign, Ill.
Luke, Fred K. ....	Farmer, R. F. D. No. 2, Kalispell, Mont.
Parker, Fannie (Spooner) ....	Brookings
Sproul, Alex H., Director Com. Dept., State Normal, ....	
.....	584 E. 13th St. N., Portland, Ore.
Tanzy, Marvin F. ....	Died Feb. 8, 1900, at Canton, S. D.
Waters, Geo. D. ...	Real Estate, 1702 Central Ave., Indianapolis, Ind.
Williams, Elinor (Knox) ....	Phoenix, Arizona
Young, Gilbert A., Prof. of Mech. Eng., Purdue Univ. ....	
.....	739 Owen St., Lafayette, Ind.

**Class of 1895****MASTER OF SCIENCE**

McKenney, Duston W., Supervisor Manual Training ....	
.....	302 Lewis Ave., Billings, Mont.
Schoppe, W. J. A. ....	Farmer, Groton
Sproul, Alex H., Director Com. Dept., State normal, ....	
.....	584 E. 13th St. N., Portland, Ore.

**BACHELOR OF SCIENCE**

Allison, Wm. F., Prof. of Civil Eng., U. of Wash., Seattle, Wash.	
Brown, Sarah ....	Shannon City, Iowa
Cornell, Harry M. ....	Real Estate, Mott, N. D.
Mayland, Mabel (Merrick) ....	Troy, Kan.
Parker, Anna (Moore) ....	Brookings
Salisbury, Edith (Robertson) Care Y. M. C. A., 124 E. 28th St.,	
.....	New York, N. Y.
Sevy, Isaac B. ....	Teacher, Freewater, Oregon
Sproul, Wm. T., Gen. Mgr. Ingersoll Milling Machine Co. ....	
.....	1751 Clinton St., Rockford, Ill.
Thorner, John J. ....	Prof. of Botany, U. of Arizona, Tucson
Wilcox, Ernest N. ....	Farmer, Thawville, Ill.

**PHARMACY GRADUATES**

Briggs, Elmer E. ....	Farmer, Muscoda, Wis.
Knox, Wm. H. ....	With U. S. Dept. of Agr., Phoenix, Arizona
Lentz, Elmer A. ....	Dentist, Brookings
Murphy, Wm. ....	Died July 5, 1896, at Brookings
Whitehead, B. T. ....	Died April 1, 1913, at Brookings



**Class of 1896****MASTER OF SCIENCE**

Brown, James A. . . . .Attorney, 816 Sec. Mut. Bldg., Lincoln, Neb.  
 Luke, Fred K. . . . .Farmer, R. F. D. No. 2, Kalispel, Mont.  
 Robertson, Ada N. . . . .Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Snell, Effie (Clark), 400 E. 14th St., University Place, Lincoln, Neb.  
 Wilcox, Ernest N. . . . .Farmer, Thawville, Ill.

**BACHELOR OF SCIENCE**

Atkinson, Jesse C. . . . .Farmer, Allegan, Mich.  
 Carter, Louis W. . . . .Register of Deeds, Highmore  
 Dibble, Ida (Brown) . . . . .816 Sec. Mut. Bldg., Lincoln, Neb.  
 Downing, Jennie C. . . . .Tel. Mgr., Rathdrum, Idaho  
 Grattan, Paul H. . . . .Traveling Salesman, St. Paul, Minn.  
 Hegeman, Harry A., Captain, 19th Infantry, U. S. A., El Paso, Tex.  
 Holm, Andrew B. . . . .Accountant, Brookings  
 Hoy, Howard H. . . . .Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.  
 Korstad, Mary . . . . .Brookings  
 Lusk, Willard C. . . . .Editor Yankton Press and Dakotan, Yankton  
 Mathews, Alta (Smith) . . . . .Pepperwood, Cal.  
 Mathews, Nora (Hoy) . . . . .Brookings  
 Sasse, Ernest G. . . . .Physician, Lingerwood, N. D.  
 Williamson, Albert . . . . .Attorney, Kennebec

**PHARMACY GRADUATES**

Cotter, J. C. . . . .Merchant, Dell Rapids  
 Grove, Eugene . . . . .Physician, Arlington, S. D.  
 Moore, Thomas . . . . .Druggist, Waterloo, Ia.  
 Palmer, Horton . . . . .Druggist, 426 S. Sycamore St., Santa Ana, Cal.  
 Sherwin, Frank . . . . .Merchant, Willamina, Ore.

**Class of 1897****MASTER OF SCIENCE**

Davis, Homer . . . . .Physician, Genoa, Neb.

**BACHELOR OF SCIENCE**

Ainsworth, Cephas B. . . . .Land, 406 Idaho St., Lewiston, Mont.  
 Atkinson, George . . . . .Map Publisher, La Fleche, Saskatchewan, Canada  
 Atkinson, Walter., Civil Engineering, 632 W. 67th St., Chicago, Ill.  
 Boyden, Frank E., Physician and Surgeon . . . . .  
 . . . . .116 Lewis St., Pendleton, Oregon  
 Clevenger, John W. . . . .Dentist, Chamberlain  
 Hargis, Christie (Saylor) . . . . .1019 6th Ave., E. Des Moines, Iowa  
 Hazel, Wm. A. . . . .Lawyer, 208 6th Ave., S. E., Aberdeen

Husted, Harley H. .... Died Jan. 14th, 1907, at Lincoln, Neb.  
 Jolley, Wm. G. .... Supt. of Schools, Cumberland, Wn.  
 Madden, Cassie (Crowley), Stenog. 625 9th St. S., Minneapolis, Minn.  
 Olson, Eva .... Teacher, 221 4th Ave., N., South St. Paul, Minn.  
 Parsons, Thos. S. .... Prof. of Agro., U. of Wyo., Laramie, Wyo.  
 Roe, Robert .... Stockman, Highmore  
 Shuster, John W., Asso. Prof. Elec. Eng., U. of Wisconsin, Madison  
 Thornber, Walter S., Director Extension Work, Washington State  
 College ..... Pullman  
 Walters, Wm. H. .... Grain Buyer, Bruce  
 West, Orpha (Sevy) .... Freewater, Ore.  
 Whaley, Neva (Harding) .... Brookings  
 Whitehead, Bower T. .... Died April 1, 1917, at Brookings  
 Wilcox, Alice (Remsburg) .... Thawville, Ill.  
 Work, Lloyd E. .... Bond Salesman, 10 S. La Salle St., Chicago, Ill.  
 Young, Grace (Bullen) .... 260 Jessup St., Portland, Ore.

### Class of 1898

#### MASTER OF SCIENCE

Chilcott, E. C., Agronomist in charge of Dry Land Agriculture,  
 ..... Washington, D. C.  
 Harkins, Lilla A., Prof. Domestic Science .....  
 ..... Montana Agri. College, Bozeman, Mont.  
 Parsons, Thos. S. .... Prof. of Agro., U. of Wyo., Laramie

#### BACHELOR OF SCIENCE

Ainsworth, Howard, Fruit Grower .....  
 ..... R. F. D. No. 17, Mountain View, Cal.  
 Ainsworth, Flora (Hazle) ..... 208 6th Ave., S. E., Aberdeen  
 Barton, Alice (White) ... R. F. D. No. 7, Box 25 D., Santa Ana, Cal.  
 Beck, Louis ..... Engineer "Ana Dean Farm," Barberton, O.  
 Bolles, Myrick N. .... Farmer, Brookings  
 Curtiss, Elsie (Crane) .... Kettle Falls, Wash.  
 Davidson, Margaret (Crane) ..... 2917, 18th St., Spokane, Wash.  
 Fjerestad, Hans C. .... Merchant, 655 S. Main Ave., Sioux Falls  
 Harding, Charles, J. .... Teacher, Carpenter, S. D.  
 Hegeman, Maude (Boyden) ..... 116 Lewis St., Pendleton, Ore.  
 Hegeman, Mabel (Allison) ..... Univ. of Wash., Seattle, Wash.  
 Hodgeson, Herbert H., Top. Eng., U. S. Geol. Survey, Wash., D. C.  
 Knox, Wm. H. .... With U. S. Dept. of Agr., Phoenix, Arizona  
 Lawrence, Claude W. .... Farmer, Sequim, Wash.  
 Lawrence, Clay ..... Lawyer, Pioneer Bldg., Seattle, Wash.  
 Loveland, Addie (Towne) .... 2104 Penn. Ave. S., Minneapolis, Minn.  
 Paddock, Jay M. .... Died Dec. 16, 1916, at Eugene, Ore.  
 Riemann, Edith (Adams) ..... Oak Park, Ill.  
 Thornber, Wm. T. .... Farmer, Colman

Towne, Judson, Teacher Physics, E. Side H. S. ....  
 .....2104 Penn. Ave. S., Minneapolis, Minn.

### PHARMACY GRADUATES

Beebe, Jay L. ....Physician and Surgeon, Anaheim, Cal.  
 Clevenger, J. W. ....Dentist, Chamberlain  
 Holsey, Joseph ....Druggist, Veblen  
 Lee, Berton E. ....Accountant, 104 S. 4th St., Mankato, Minn.

#### Class of 1899

### MASTER OF SCIENCE

Dibble, Hattie (Stow) ....College Station, Pullman, Wn.  
 Mathews, Hubert B. ....Prof. of Physics, S. D. S. C.  
 Thornber, Walter S., Director Extension Work, Washington State  
 College ..... Pullman  
 Whitten, John C. ....Prof. of Hort., U. of Missouri, Columbia

### BACHELOR OF SCIENCE

Colegrove, Ina (Nelson) Care Bureau of Standards, Washington, D. C.  
 Findeis, Philip ....Lumber Merchant, Miranda  
 Lawrence, Mary M., Home Economics, Pioneer Bldg., Seattle, Wn.  
 Lawrence, Wm. H., Prof. of Horticulture, University of Missouri,  
 ..... Columbia  
 Mason, Nellie (Mason) ....Albia, Iowa  
 Nachtigal, Isaac ....Accountant, Ortonville, Minn.  
 Sherwin, Howard H., Civil Engineer, 70 N. Y. Ave., Brooklyn, N. Y.  
 Walter, Edith (Frystrom) ....Died May 16, 1910, at Geneseo, N. D.  
 West, George ....Physician, Armstrong, Iowa

### PHARMACY GRADUATES

Carr, George ....Druggist, Bison  
 Crowley, D. C. ....Druggist, Portland, Ore.  
 Hepner, Frank ....Asst. Chemist, U. of Wyoming, Laramie  
 Kendall, Clinton D. ....Druggist, Brookings  
 Lindsey, Charles ....Farmer, Winifred  
 Oulton, Frank ....Abstrator, Choteau, Mont.  
 Shriver, E. M. ....Real Estate, Coos Bay, North Bend, Ore.  
 Taylor, C. DeWitt .....

#### Class of 1900

### BACHELOR OF SCIENCE

Allen, Hart M. ....Druggist, Maysville, Cal.  
 Anderson, Clark W. ....Died March 6th, 1902, at Brookings  
 Beebe, Jay L. ....Physician and Surgeon, Anaheim, Cal.  
 Carlson, Esther (Lilygreen) ....701 Magnolia St., St. Paul, Minn.

Carlson, Ella (Howard)	Lake Preston
Davies, Sara (Sherwin)	70 N. Y. Ave., Brooklyn, N. Y.
Davies, Mary (Hutchins)	Falls City, Neb.
DeLa, John W.	Lumber, Velva, N. D.
Doughty, Matthew W., Civil Engineer with Delaware & Lacka- wanna Ry., Hoboken, N. J.	
Grove, Frank W.	Dentist, Delta, Colo.
Harza, Carl	Electrician, 21 Scovel Place, Detroit, Mich.
Kendall, Clinton D.	Druggist, Brookings
Lawrence, Jessie (Hagerman)	R. 1, Auburn, Wash.
Mathews, Alice (Albright)	1323, 6th Ave. N., Great Falls, Mont.
Mathews, Roscoe A., Coal and Feed, 1323 6th Ave. N.	
	Great Falls, Mont.
Morrison, Freda (Cole)	Wenatchee, Wash.
Olson, Gustava (Hodgeson)	Linden, Md.
Williams, Callie (Olson)	116 N. Summit Ave., Sioux Falls

### PHARMACY GRADUATES

Bentley, Wm. S.	Physician and Surgeon, Rapid City
Brosseau, Jessie E.	Physician and Surgeon, Frankfort
Baldwin, Corwin B., Druggist and Member State Board of...	
Pharmacy	Rapid City
Connell, John C.	Druggist, Luverne, Minn.
Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.	
Eckhart, Henry	Died at Menno, S. D.
George, William	Physician and Surgeon, Selby
Hart, Bertrand	Physician and Surgeon, Blunt
Jones, Robert	Druggist, Madison
West, Hugh H.	Physician and Surgeon, Spurling Bldg., Elgin, Ill.

### Class of 1901

### MASTER OF SCIENCE

Knox, Wm. H.	With U. S. Dept. of Agr., Phoenix, Arizona
Whitehead, Bower T.	Died April 1, 1917, at Brookings

### BACHELOR OF SCIENCE

Bagley, Sussana..Teacher, 3012 Ezekiel St., Lake Co., Zion City, Ill.	
Bolles, Laura Jane	Brookings
Brosseau, Jesse E.	Physician, Frankfort
Boyd, Mary (Labbitt)	392 Davis St., Sioux City, Iowa
Cranston, Margaret (Young)..Died June 7th, 1907, at Oakes, N. D.	
Culhane, Michael E.	Culhane Adjustment Co., Brookings
Davies, Autumn	Instructor in History, H. S., Omaha, Neb.
Dodge, Fred E.	Hotel Mgr., Redfield
Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.	
Enos, Winifred (Kendall)	Brookings

Erickson, Martin L. .... Forestry Service, Medford, Ore.  
 Evans, Lina (Roskie) ..... Custer  
 Fishback, Myra (Kennedy) ..... 86 College St., Calcutta, India  
 Harza, LeRoy F. .... Civil Eng., Sault St. Marie, Mich.  
 Hatton, John H. .... Forestry Service, Forestry Bldg., Denver, Colo.  
 Johnson, Rhoda (Lee) ..... Died Oct. 18, 1909, Denver, Colo.  
 Kendall, Leonard J. .... Telegraph Operator, Brookings  
 Kennedy, C. Leroy .....  
 ..... Fruit Raiser, R. F. D. No. 18, Mountain View, Cal.  
 Langdon, Lillian (Culhane) ..... Brookings  
 McElmurry, Loretta, Instructor Domestic Science, State Normal,  
 ..... Madison, S. D.  
 Mork, Theodore ..... Farmer, Des Lacs, N. D.  
 Phillips, Florence (Haas) ..... Arlington  
 Phillips, C. Louise .... Librarian, U. S. Dept. Agr., Washington, D. C.

#### PHARMACY GRADUATES

Cornell, Edward, Pharmacist .....  
 ..... 1824 Lyndale Ave., S., Minneapolis, Minn.  
 Tidball, Clyde ..... Druggist, Brookings

#### Class of 1902

#### BACHELOR OF SCIENCE

Fleming, Michael, City Mgr., M. A. Hanna Coal Co., St. Paul, Minn.  
 George, William A. .... Physician and Surgeon, Selby  
 Hart, Bertrand M. .... Physician and Surgeon, Blunt  
 Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie  
 Johnson, Clara (Johnson) ..... Brookings  
 Johnson, Edward ..... Died May 1, 1907, Tacoma, Wash.  
 Kephart, George ..... Lawyer, Iowa Building, Sioux City, Ia.  
 Lee, Berton E. .... Accountant, 104 S. 4th St., Mankato, Minn.  
 Ramsey, Henry J., Expert in Fruit Storage, Bureau Plant In-  
 dustry ..... Washington, D. C.  
 Roskie, Geo. .... Forester, Custer  
 Thornber, Edith (Cuckow) ..... La Junta, Colo.  
 Trooien, Ole N. .... Died at Brookings, Dec. 21, 1915  
 Winegar, Laura ..... Nurse, Brookings

#### PHARMACY GRADUATES

Allison, Wm. F., Prof. of Civil Eng., U. of Washington .....  
 ..... Seattle, Wash.  
 Boyden, Frank E., Physician and Surgeon, 116 Lewis St. ....  
 ..... Pendleton, Ore.  
 Christianson, Bennett ..... Druggist, Lake Preston  
 Jarratt, Arthur A. .... Druggist, Colman  
 Jarvis, S. Hall ..... Druggist, Faulkton  
 Leighty, James A. .... Druggist, Winifred



Morton, Frederic M. ....	Druggist, Lake City
Pickles, Chester E. ....	Farmer, Elrod
Schnaidt, Henry, Druggist and President State Board of Pharmacy .....	Parkston
Schroeder, Anna (Gassman) .....	Howard
Thomas, John C. ....	Druggist, Marion

### Class of 1903

#### MASTER OF SCIENCE

Crane, Austin B., Prof. of Math. and Civ. Eng., Spokane Univ., .....	Spokane, Wash.
Hoy, Howard H., Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.	

#### BACHELOR OF SCIENCE

Almond, Fred C. ....	Died March 12th, 1909, at Clear Lake
Cole, John S., Examiner of Dry Land Agr. Exp. Stations Dept. of Agr. ....	989 So. Penn. Ave., Denver, Colo.
Colegrove, Lettie (Drew) .....	Farmington, Minn.
Cuckow, Fred W. ....	Lawyer, La Junta, Colo.
Hubbart, Minnie (Holbein) .....	Minot, N. D.
Johnson, Isaac .....	Lumberman, Brookings
Kendall, Krete (Miller) .....	Brookings
Langdon, Alice .....	Stenographer, Brookings
Miller, Shirley P. ....	Professor Zoology, S. D. S. C.
Norton, Frank A. ....	Fruit Grower, Grand View, Wash.
Otterness, Jens M., Private Secretary to Senator Sterling .....	
.....	441 Senate Office Bldg., Washington, D. C.
Peirce, E. Esther .....	Teacher, 524 E. Kemp St., Watertown
Sanborn, Ethel I., Instructor Univ. of Oregon .....	
.....	670 12th Ave., E., Eugene, Ore.
Seide, Louise (Prell) .....	Calamus, Iowa
Sarvis, Roscoe J., Telephone Engineer .....	
.....	1321 7th St., S. E., Minneapolis, Minn.
Webster, James L. ....	Farmer, Wenatchee, Wash.
Westcott, Geo. R., Asst. Engr., Mo. Pac. Ry. ....	
.....	5764 Goodfellow Ave., St. Louis, Mo.

#### PHARMACY GRADUATES

Drew, Arthur W. ....	Physician and Surgeon, Farmington, Minn.
Hall, Roy J. ....	Druggist, Oldham
Heston, Edward C. ....	Physician and Surgeon, Roslyn, Wash.
Hollister, Arthur R. ....	Traveling Salesman, Madison
Howell, John E., Chemist, S. P. R. R. ....	
.....	504 Avondale Ave., Houston, Texas
Johnston, Samuel .....	Druggist, Hazel
Norton, Frank A. ....	Fruit Grower, Grand View, Wash.
Steiner, Frederick W., Physician .....	

.....323 Union Ave., Havre de Grace, Md.  
 Trumm, Robert E. ....Druggist, Hayti  
 Van Dusen, Fred J. ....Lead  
 Williams, Percy, Physician and Surgeon .....  
 .....557 Spring St., Los Angeles, Cal.  
 Young, Alfred J. ....Farmer, Adanac, Saskatchewan

#### Class of 1904

#### MASTER OF SCIENCE

Trooien, Ole N. ....Died in Brookings, Dec. 21, 1915

#### BACHELOR OF SCIENCE

Binford, Wm. W. ....Lumberman, Greenleaf, Idaho  
 Bushnell, Maude (Kelton) ....Poynette, Wis.  
 Loucks, Anna Y. (Brown) ....Brookings  
 Mattice, Albert F. ....Oculist, 1017 Cobb Bldg., Seattle, Wash.  
 McGarry, Lawrence R. ....Merchant, Mansfield  
 Ruth, Thomas H. ....Veterinary Surgeon, DeSmet  
 Sanderson, Everett G. ....Farmer, Aurora  
 Sherwin, Ralph L. ....Civil Engineer, Bay Harbor, Fla.  
 Smith, Wm. H. ....Missionary, Damaguete, P. I.  
 Thompson, Clarence .....Farmer, Dell Rapids  
 Walter, L. Erving .....Farmer, Conde

#### PHARMACY GRADUATES

Anderson, Ernest .....Druggist, South Shore  
 Dillon, Cornelius .....Druggist, Hotel Smede Bldg., Eugene, Ore.  
 Frick, Harry E. ....Merchant, Mitchell  
 Goodale, Alton R. ....Druggist, Angeles Pharm., Los Angeles, Cal.  
 Hooker, Henry .....Physician, Danville, Ill.  
 Koch, Arthur E. ....Attorney, 621 Ford Bldg., Detroit, Mich.  
 Ramsdell, Leonard C. ...Druggist, 901 Riverside Ave., Spokane, Wn.  
 Thompson, Gottfrey .....Physician and Surgeon, Sioux Falls  
 Weisflock, Theodore .....Druggist, Frankfort

#### Class of 1905

#### MASTER OF SCIENCE

Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie  
 Norton, Frank A. ....Fruit Grower, Grand View, Wash.  
 Phillips, C. Louise, Librarian, Bureau of Plant Industry, Grain  
 Standardization ..... Washington, D. C.  
 Thompson, Clarence .....Farmer, Dell Rapids  
 Walter, L. Erving .....Farmer, Conde

#### BACHELOR OF SCIENCE

Boyden, Guy L., Physician and Surgeon .....

.....	412 Perkins St., Pendleton, Ore.
Chappell, Bessie .....	Teacher, Lamar, Colo.
Chappell, Elsie (Wilson) .....	Brookings
Davis, Clifford, W. ....	Farmer, 2337 Grant St., Berkley, Cal.
Elliott, Roy K. ....	Electrician, 20 Bay State Ave., Somerville, Mass.
Fassett, Della (Loucks) .....	Watertown
Fishback, Van Dusen .....	Loans, Brookings
Forrest, Victor E., ....	Contractor, 408 9th St., Minneapolis, Minn.
Fulkerson, Vincent .....	Special Agent, Dept. of Agr., Fallon, Nev.
Grove, Mary (Potter) .....	Univ. of Tenn., Nashville
Hage, Mary (Potter) .....	Univ. of Tenn., Nashville
Howg, Edwin M. ....	Physician and Surgeon, New Effington
Jensen, Lewis N., Special Agent U. S. Dept. Agri.,	Amarillo, Texas
Johnson, Carl L., Electrician .....	
.....	1517 Eastern Broadway, Schenectady, N. Y.
Mathews, Harry E. ....	Railway Service, Las Vegas, Nevada
Miller, Ralph L. ....	Lumberman, Melville, N. D.
Murphy, Matt W. ....	Lawyer, 408 8th Ave. S., Fargo, N. D.
Nelson, John Harland .....	Bureau of Standards, Washington D. C.
Ronning, Oscar E. ....	Rural Mail Carrier, Hayti
Schaphorst, Wm. F., Technical Writer, .....	
.....	Woolworth Bldg., New York City
Seeger, Adolph M. ....	Elec. Eng., Light & Power Co., Toledo, O.
Slocum, Ina S. (Deeley) ....	2818 Granville St. S., Vancouver, B. C.
Thogerson, Arthur A. ....	Contractor, 437 C. of C., Portland, Ore.
Walters, Daisy .....	Teacher, Bruce
Williams, Harry, Real Estate .....	
.....	L. A. Investment Bldg., Los Angeles, Cal.
Williams, Percy, Physician and Surgeon .....	
.....	557 S. Spring St., Los Angeles, Cal.

### PHARMACY GRADUATES

Fjerestad, Carl .....	Druggist, Elkton
Howg, Edwin M. ....	Physician and Surgeon, New Effington
Larson, Lars P. ....	Teacher, R. 5, Howard
Mathews, Harry E. ....	Railway Service, Las Vegas, Nevada
McCurdy, Walter .....	Banker, Lane
Morton, Grant J., Federal Drug Ins. ....	
.....	105 Custom House, Portland, Ore.
Pottinger, Geo. ....	Druggist, Valley Springs
Thompson, Clarence .....	Farmer, Dell Rapids
Volin, Porter .....	Physician, Lennox

### Class of 1906

### BACHELOR OF SCIENCE

Aldrich, G. Malcolm, Prin. Calhoun Schools .....	
.....	3205 Hennepin Ave., Minneapolis, Minn.

Barrett, J. Wylie	Electrical Engineer, Plankinton
Bonesteel, Bee (Dillman)	Newell
Brownell, Ellen (Wellington)	Calipatua, Cal.
Burghardt, Roy D.	Electrician, 1007, 1st Ave., Seattle, Wash.
Carpenter, Abbie J., Domestic Science Teacher	
	524 1/2 Broadway, Seattle, Wash.
Chilcott, Ellery F.	Supt. Ex. Station, Woodward, Okla.
Coller, Fred A., Physician and Surgeon	
	658 W. Jefferson St., Los Angeles, Cal.
Davies, Gladys (Grace)	Akron, Colo.
Erstad, Alfred J., Electrician, Standard Mach. Co.,	Portland, Ore.
Evans, Edna V.	Bank Clerk, Brookings
Grace, Oliver	Supt. U. S. Ex. Sta., Akron, Colo.
Kennard, Frank L., Agronomy, N. W. Exp. Station,	Crookston, Minn.
Knox, Arthur H.	Farmer, Alpena
Koch, Arthur E.	Lawyer, 621 Ford Bldg., Detroit, Mich.
Moffatt, Margaret E.	Teacher, Bruce
Reich, Rose M.	Teacher, Tunnel City, Wis.
Thornber, Jessie B.	La Junta, Colo.
Youngberg, Guy E.	P. G. Student, Harvard Univ., Boston, Mass.

### PHARMACY GRADUATES

Allison, Harold	Physician and Surgeon, Heppner, Ore.
Bergeim, Olaf, Asst. in Chem., Jefferson Med. College	
	10th and Walnut Sts., Philadelphia, Pa.
Davies, Gladys (Grace)	Akron, Colo.
Harben, Bartlett L.	Died June 10, 1912, at Winner, S. D.
Holm, A. B.	Accountant, Brookings
Locke, Chas.	Pharmacist, Brookings
Wipf, Michael J.	Druggist, Alsen, N. D.

### Class of 1907

### MASTER OF SCIENCE

Culhane, Michael E.	Of Culhane Adjustment Co., Brookings
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### BACHELOR OF SCIENCE

Binnewies, Mabel (Shanley)	Brookings
Briggs, Stephen F., of Briggs & Stratton Co.	
	258 Milwaukee St., Milwaukee, Wis.
Burch, Walter S., Elec. Engr., with Rochester Railway and	
Light Co.	81 S. Fitzhugh St., Rochester, N. Y.
Christianson, Christine (Buck)	1644 Adams St., Denver, Colo.
Dillman, Arthur C.	Special Agent, Dept. of Agr., Newell
Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College	
	706 N. 12th St., Corvallis, Ore.
Elliott, Bruce A.	Manual Training Teacher, Hibbing, Minn.
Elliott, Ross W.	Manual Training Teacher, Hibbing, Minn.

Fjerestad, Alman	Electrical Engineer, Estelline
Gagel, Gerald	Electrician, Rialto, Cal.
Hofstetter, Geo., Instructor Manual Training, Govt. School	Box 487, Manila, P. I.
Kirk, John R.	Farmer, Springfield
Johnson, Aaron G., Plant Pathologist, U. of Wis.	1910 West Lawn Ave., Madison, Wis.
Knutson, Mabel (Trooien)	Teacher, Brookings
McCordic, Clare	Farmer, Doland, S. D.
McElmurry, Rilla (Eels)	129 Wellendorf Ave., Youngstown, O.
Morton, Grant J., Fed. Drug. Ins.	105 Custom House, Portland, Ore.
Reich, J. Carl, Western Elec. Co., Dept. Hawthorne Sta., Chicago, Ill.	
Salmon, Cecil, Agronomist Kansas Agr. College	1630 Leavenworth, Manhattan
Sanderson, Eugene, Electrician, Care Power Eng. Dept., N. Y. Telephone Co.	Jersey City, N. J.
Tuttle, Volney J., General Electric Co., D. C. Eng. Dept.	Schnectady, N. Y.
Underwood, Genevieve (Schmidt)	Bryant
Westcott, Ruth M. (Johnson)	1910 West Lawn Ave., Madison, Wis.
Work, Mary L.	Stenographer, 3850 Indiana Ave., Chicago

### PHARMACY GRADUATES

Dexter, David F.	Druggist, Canton
Roney, Ray W.	Druggist, Chester
Ennis, Herbert I.	Druggist, Volga
Kartrude, Inga M.	Teacher, Hardwick, Minn.

### Class of 1908

### MASTER OF SCIENCE

Coller, Fred A., Physician and Surgeon	658 W. Jefferson St., Los Angeles, Cal.
Koch, Arthur E.	Lawyer, 621 Ford Bldg., Detroit, Mich.

### ELECTRICAL ENGINEER

Elliott, Ross W.	Manual Training, Hibbing, Minn.
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### BACHELOR OF SCIENCE

Alton, Benjamin H., Physician and Surgeon	Mass. Gen. Hosp., Boston, Mass.
Bergeim, Olaf, Asst. in Chemistry, Jefferson Med Co.	Philadelphia, Penn.
Carpenter, Clarence A., Electrical Engineer	With Bureau of Standards, 1133 6th St., Washington, D. C.
Chilcott, Ralph	Farmer, Vienna, Va.
Cooley, William R.	Stockman, Springfield



- Griffith, T. Edwin ..... Farmer, Timmer, N. D.  
 Holsey, Ernest ..... Elec. Eng., Y. M. C. A. Bldg., Spokane, Wash.  
 Hubbard, Edith J. .... Asst. Librarian, S. D. S. C.  
 Hyde, Hallie W. .... Inst. Dom. Sci., U. of Idaho, Moscow  
 Kelly, Amy ..... Inst. Dom. Sci., U. of Idaho, Boise  
 Kendall, Nellie G. .... Instructor in English, S. D. S. C.  
 Locke, Francis, J. Asst. Mgr. Western Electric Co. ....  
 ..... 38 W. 61st St., New York, N. Y.  
 Mathews, Oscar R. .... Expert, Dry Land Agr., Newell  
 Mayland, Amy ..... Died Feb. 17, 1909, at Lincoln, Neb.  
 Mayland, George R. .... Farmer, Brookings  
 Nelson, Aaron L., Traveling Electrician, With G. E. Co., Brookings  
 Nilsson, Edward, Artist, Capital Engraving Co. ....  
 ..... 219 W. Edwards St., Springfield, Ill.  
 Olberg, Fred C. .... Druggist, Ballard, Wash.  
 Perry, William J. .... Elec. Eng., Corozol, Canal Zone  
 Soreng, Edward M., Electrician, with Briggs-Stratton Co. ....  
 ..... 198 15th St., Milwaukee, Wis.  
 Sperb, John J. .... Civil Eng., Woodburn, Ore.  
 Ulrich, Darwin William, Electrical Engineer ....  
 ..... 2605 Cal. Ave., Seattle, Wash.  
 Underwood, Beatrice ..... Watertown  
 Underwood, Loto (White), Brooklyn Botanical Gardens ....  
 ..... Brooklyn, N. Y.  
 Weeks, Gordon A., Electrical Engineer .....  
 ..... 711 Post St., Robbins, San Francisco, Cal.  
 West, Florence E. .... Hill Top Farm, Rhinebeck, N. Y.  
 Whitehead, Lindsey W. .... Instructor Civ. Eng., State College, Pa.  
 Williams, Ruby (Heil) ..... 921 W. 11th St., Riverside, Cal.

### PHARMACY GRADUATES

- Murphy, James P. .... Druggist, Rapid City  
 Hoch, Joseph L. .... Druggist, Tyndall  
 Olberg, Fred C. .... Druggist, Ballard, Wash.  
 Quiggle, Ernest J. .... Pharmacist, Groton

### Class of 1909

### MASTER OF SCIENCE

- Mathews, Oscar R. .... Expert, Dry Land Agr., Newell  
**ELECTRICAL ENGINEER**  
 Elliott, Bruce ..... Manual Training Teacher, Hibbing, Minn.

### MECHANICAL ENGINEER

- Schaphorst, Wm., Technical Writer .....  
 ..... Woolworth Building, New York City

### BACHELOR OF SCIENCE

- Bacon, Eva (Paulson) ..... Castlewood

Bushnell, Edna .....	Brookings
Camp, Fred .....	Farmer, Winfred, Mont.
Catlett, Winifred ....	Teacher Home Economics, Grand Rapids, Wis.
Champlin, Manley .....	Asst. Prof. of Agronomy, S. D. S. C.
Clarke, Roy .....	Chicago, Ill.
Coughlin, Chas., Supt. Construction, Briggs-Stratton Co. ....	
.....	258 Milwaukee St., Milwaukee, Wis.
Denhart, Cecil .....	Grain Dealer, White
Erwin, Ada .....	Brookings
Evans, Iva (Morrison) .....	Brookings
Furnstahl, John .....	Died Dec. 16, 1916, at Ajo, Arizona
Jensen, Harvey ..	Real Estate, 943 Andrus Bldg, Minneapolis, Minn.
Jones, Robert .....	Lawyer, Milbank
Kremer, Alvin .....	Bookkeeper, U. S. Nat'l. Bank, Portland, Ore.
Lane, Lloyd .....	Farmer, Beresford
McKeown, Ralph .....	Farmer, Sentinel Butte, N. D.
Marquis, Sidney, Electrical Engineer .....	
.....	With Briggs and Stratton Co., Milwaukee, Wis.
Matheny, Chester, Elec. Eng. ....	
.....	With Briggs and Stratton Co., Milwaukee, Wis.
Odland, John .....	Farmer, Sentinel Butte, N. D.
Palm, Ellen (Olson) .....	Norden
Peirce, Ruth .....	Music Teacher, Brookings
Phillips, Geo. ....	Y. M. C. A. Sec., S. D. S. C., Brookings
Sarvis, Johnson .....	Special Agent, Dept. of Agr., Mandan, N. D.
Sperb, Frank .....	Civil Engr., Woodburn, Ore.
Swering, Joe, Electrical Engineer .....	
.....	With Westinghouse Mfg. Co., Wilkesburg, Pa.
Treacy, Timothy, Catholic Priest .....	
.....	487 Mich. Ave., N. E., Washington, D. C.
Vernlund, Carl, Physician and Surgeon .....	
.....	Hartford Hospital, 211 Church St., Hartford, Conn.
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.	
Wickre, Jacob .....	Farmer, Langford
Wright, Mary (Dutcher) .....	706 N. 12th St., Corvallis, Ore.

### PHARMACY GRADUATES

Abbott, Guy S. ....	Druggist, Yale
Buck, Ervin .....	Druggist, Wessington Springs
Crosby, LeRoy .....	Pharmacist, Hitchcock
Dickey, James .....	Druggist, Iroquois
Hage, Christian .....	Druggist, Toronto
Wilson, Frank M. ....	Druggist, Ronan, Mont.
Youngberg, Guy E. ....	P. G. Student, Harvard Univ., Boston, Mass.

### Class of 1910

### MASTER OF SCIENCE

Alton, Benjamin H., Physician and Surgeon .....	
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.....Mass. Gen. Hosp., Boston, Mass.  
 Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College ....  
 .....706 N. 12th St., Corvallis, Ore.  
 Youngberg, Guy E. ....P. G. Student, Harvard Univ., Boston, Mass.

### MECHANICAL ENGINEERING

Hofstetter, George, Inst. in Manual Training .....  
 .....Govt. School, Box 487, Manila, P. I.

### BACHELOR OF SCIENCE

Atkinson, Fay .....Farmer, Coal Harbor, N. D.  
 Barber, Floyd, Civil Engineer .....  
 .....2006 33rd St., Care Co. Engineer, Everett, Wash.  
 Biggar, Howard H. ....U. S. Dept. of Agr., Washington, D. C.  
 Crothers, Harold, Inst. in Elec. Eng., U. of Wisconsin .....  
 .....1809 Ray St., Madison, Wis.  
 Crothers, Ralph .....Farmer, Badger  
 Fickle, Walter .....Died Jan. 26, 1911, at Blunt  
 Fridley, Ray .....Manager Fridley's Garage, Brookings  
 Grotta, Edwin .....Implement Dealer, Esmond  
 Johnson, Charles .....Hardware Merchant, Hetland  
 Johnson, Milla (Anderson) .....New England, N. D.  
 Kartrudge, Inga .....Teacher, Hardwick, Minn.  
 Kelly, T. B. ....Prof. of Music, State Normal, Fremont, Neb.  
 Lothrop, Elmer .....Electrical Engineer, Redfield  
 Lloyd, Robert .....Elec. Contr., Santa Ana, Cal.  
 Matheny, Allie (Wooledge) .....Minot, N. D.  
 Matheny, Fred ....Civil Eng., 2004 L. C. Smith Bldg., Seattle, Wash.  
 Morrison, Joseph .....Agr. Expert, Sub Station, Highmore  
 Nagei, Herman, Research Specialist, with Douglas Starch Co. ..  
 .....Cedar Rapids, Ia.  
 Ort, A. A., Civil Engineer .....  
 .....Care Chief Eng., Miami Conservancy District, Dayton, O.  
 Palm, Andrew .....County Agricultural Agent, Watertown  
 Sexauer, Elmer .....Grain, Brookings  
 Sheldon, Nettie (Atkinson) .....Coal Harbor, N. D.  
 Wahl, Walker W. ....Farmer, Cartersville, Mont.  
 Welch, Cecile (Sexauer) .....Brookings  
 Wohlheter, Verne .....Attorney, Sisseton  
 Yocom, Frank .....Inst. in Manual Training, Holtville, Cal.

### PHARMACY GRADUATES

Brown, Geo. B. ....Farmer, Clark  
 Goldthorp, George .....Druggist, Conde  
 Morrison, Joseph .....Agricultural Expert, Sub Station, Highmore  
 Williams, Arthur .....Pharmacist, Sturgis

**MASTER OF SCIENCE**

Sarvis, Johnson . . . . . Special Agent, Dept. of Agr., Mandan, N. D.  
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.

Balmat, John	Civil Engineer, Yankton, S. D.
Catlett, Marguerite	Brookings
Cooledge, Leslie	Asst. Prof. Bacteriology, East Lansing, Mich.
Cottingham, Jay, Lumberman	
	With Fullerton Lumber Co., Sioux City, Iowa
Erwin, Ruth (Bibby)	State College, Pa.
Finley, Vollmar	Inst. in Agr., Redwood Falls, Minn.
Fridley, Bess (Fromme)	Blacksburg, Va.
Fridley, Richard	Died Aug. 23, 1912, at Lake Benton, Minn.
Fromme, Fred, Prof. of Bot., Va. Inst. of Technology,	Blacksburg
Gropengieser, Fred	Asst. Bank Cashier, Onida
Haas, Carrier (Quinn)	Arlington
Hallen, Harold	Electrical Engineer, Ord, Neb.
Huntemer, Percy	Inst. in Agr., Melrose, Minn.
Jarman, Mabelle	Brookings
Johnson, Clifford	Died September, 1912, at Huron
Knutson, Geneva (Flittie)	Brookings
Ladd, Amy	Physical Director, 1007 Grant St., Carthage, Mo.
Mathewson, Lynn, Mech. Engr., 6130 Kenwood Ave., Chicago, Ill.	
McMillan, Orville	Prin. of Schools, Alpena
Meharg, Max	Inst. Man. Training, Park City, Utah
Mitchell, Harry, Elec, Engr., 2933 Girard Ave., S., Minneapolis, Minn.	
Odland, Ole M.	Farmer, Hurley
Peterson, Helen	Brookings
Plocker, Florence (Shelden)	Perdue, Sask., Canada
Quinn, Roy	Inst. in Agr., Fairfax, Minn.
Randall, Frank	Mech. Engr., Aberdeen
Sherwin, Muriel (Stoll)	Brookings
Starring, Cecil, Asst. in Hort., Mont. Agr. College, Bozeman, Mont.	
Sweneshart, John	Co. Agricultural Agent, Crandon, Wis.
Throop, Lotta (Odland)	Sentinel Butte, N. D.
Tinker, Mabel	Brookings
Wilson, R. O.	Registrar, Mont. State Col., Bozeman, Mont.

Fellows, Carl .....	Druggist, White Lake
Martin, Earl S. ....	Merchant, Oldham
Serles, Earl .....	Prof. of Pharmacy, S. D. S. C.
Shea, Henry ...	Asst. in Chemistry, Montana State College, Bozeman
Vis, Heyme .....	Druggist, Midland

**Class of 1912**  
**BACHELOR OF SCIENCE**

Atwood, Geo. B. ....Veterinarian, Arlington  
 Bibby, Irwin J., Asst. in Dairying, Penn. State Col., State College  
 Bisbey, R., Asst. in Bontany, Univ. of Minn., Minneapolis, Minn.  
 Dachtler, Fred J. ....Farmer, Sturgis  
 Edson, Ray W. ....With Gen. Elec. Co., 24 Baker St., Lynn, Mass.  
 Erdmann, Henry E., P. G. Student, U. of Wisconsin .....  
 .....619 W. Johnson St., Madison, Wis.  
 Granger, Paul F., Civ. Eng., 1444 W. 22nd St., Los Angeles, Cal.  
 Hathaway, Floyd C., Instructor in Agr. ....  
 .....Man. Training School, Ellendale, N. D.  
 Jensen, Russell C. ....Ice Manufacturer, Watertown  
 Kremer, Henrietta (Furnstahl) .....Ajo, Ariz.  
 Larson, John E., Field Agronomist, Ore. Agr. Col. ....  
 .....135 25th St., W., Corvallis, Ore.  
 Marchant, Guy R. ....Elec. Engr., 323 W. 23rd St., New York City  
 Oakland, Irwin S., Student Northwestern School of Dentistry ..  
 .....Chicago, Ill.  
 Peck, Arthur R. ....Elec. Eng., Schenectady, N. Y.  
 Pence, Clay, Elec. Salesman, 313 Penwood Ave., Wilkinsburg, Pa.  
 Reeve, John E., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.  
 Revell, Grace (Bailey) .....Ames, Ia.  
 Sauder, Wm. O. ....Forestry, Saguache, Col.  
 Schaphorst, Ben .....Lawyer, Brookings  
 Skinner, Lila, Inst. in Home Economics, U. of Ohio, Columbus, O.  
 Sparks, Henry .....Civil Engineer, Mitchell  
 Stearns, Arthur J. ....Elec. Engr., 16 Hecla Blk., Edmonton, Alberta  
 Welker, Verne E. ....Electrical Engineer, Clarion, Ia.

**PHARMACY GRADUATES**

Bacon, Harry .....Druggist, Edgemont  
 Christianson, Helen (Quinn) .....Badger  
 Clark, Robt. W. ....Died in Sioux Falls, March 26, 1916  
 Farnham, Beatrice .....Druggist, Waubay  
 Farrar, Vere .....Pharmacist, Langford  
 Grant, Clyde .....Pharmacist, Iowa City, Ia.  
 Holstrom, Will .....Pharmacist, Huron  
 Holleman, William .....Pharmacist, Springfield  
 Leavitt, Ethel .....Pharmacist, Milbank  
 Morton, Richard .....Pharmacist, New Effington  
 Serles, Raymond .....Pharmacist, Salem

**Class of 1913**  
**BACHELOR OF SCIENCE**

Basgen, Fred .....Structural Engineer, Goodwin  
 Binnewies, Edward R. ....Asso. Prof. of Chem., S. D. S. C.



Brigham, Ruth	Brinklow, Md.
Cole, Glenn H.	Farmer, Gary, S. D.
Dunn, Everett W.	Civil Engineering, Eldora, Iowa
Engstrom, Carl	Electrical Engineer, Hutchinson, Minn.
Faulkner, Hugh	Farmer, Burkmere
Fowlds, Matthew	Asst. in Agronomy, S. D. S. C.
Freiberg, George	Research Fellow, Mo. Bot. Gardens, St. Louis, Mo.
Greenly, Maurice G.	Sci. Teacher, 1036 Green St., Honolulu, Hawaii
Gurslee, Chris. B.	Inst. in Northwestern School of Dentistry ..
	.....1725 Wilson Ave., Chicago, Ill.
Heiser, Agnes K. (Yunker)	Hecla
Huyck, Nina B.	Instr. in Dom. Sci., State Nor. School, Springfield
King, Stanley	Civil Engineer, Watertown
Kremer, Ralph C.	Ajo, Ariz.
Landweer, Earl	Electrical Engineer, Hartford
McHugh, Frank James	Farmer, West Point, Mass.
Matheny, Hazel A.	Conde
Morrow, Strayer (Sauder)	Saguache, Colo.
Morrison, Guy E.	Agr. Expert, Brookings
Nilsson, Anna C.	Teacher, Henning, Minn.
Nord, Roy A.	Lawyer, Huron
Olson, Thos. G.	Elec. Eng., Canby, Minn.
Pier, Clarence L.	Ice Manufacturer, Mitchell, S. D.
Rilling, Harry M.	Asst. in Agronomy, S. D. S. C.
Sanderson, Harry M.	Asst. in Agronomy, S. D. S. C.
Shanley, Clarence	Deputy Dairy Inspector, Brookings
Shea, Henry M.	Chemist, Montana State College, Bozeman, Mont.
Shepard, Helen (Atwood)	Arlington
Sloan, Edith	Instructor Home Economics, Brookings
Somers, Grace	Instructor Home Economics, Prescott, Ariz.
Sponholz, Lydia (Britzius)	Hayfield, Minn.
Templeton, Mabel (Johnson)	Hetland
Wood, Ruth A.	Inst. Home Economics, Caldwell, Idaho

### PHARMACY GRADUATES

Eidsmoe, Clark T.	Co. Treasurer, Sisseton
Johnson, Arthur F.	Pharmacist, Springfield, Minn.
Lawler, Frank M.	Pharmacist, with L. T. Dunning Co., Sioux Falls
Null, Ralph L.	Pharmacist, Miller
Simpson, Wm. R.	Pharmacist, Flandreau
Soule, Roy H.	Druggist, Farmer
Tommeraasen, Corne	Pharmacist, Madison
Wornson, Walter A.	Medical Student, Milwaukee, Wis.

### Class of 1914

### BACHELOR OF SCIENCE

Armstrong, Lillian	Instructor in Home Economics, Elmore, Minn.
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Armstrong, Inez, Instructor in Home Economics .....	Washington Agr. College, Pullman, Wn.
Ausman, Leslie V. ....	County Agr. Agent, Clark
Britzius, Arno .....	Inst. in Agriculture, Hayfield, Minn.
Bushey, Alfred, P. G. Student, Purdue Univ. ....	
.....	210 Waldron St., Lafayette, Ind.
Casley, Lulu .....	High School Instructor, Bryant
Chappell, Vincent ....	Asst. in Dairying, Iowa State Col., Ames, Iowa
Clifford, Perry .....	Farmer, Cresbard
Dulitz, Helen .....	Webster, S. D.
Elliott, Robert .....	Registrar, S. D. S. C.
Gilbertson, Geo. ....	Asst. in Entomology, S. D. S. C.
Gotthold, Roy .....	Manual Training, Miller, S. D.
Grinols, Hazel (Palm) .....	Watertown
Halladay, Clinton, Civil Engineer .....	
.....	With Rock Island Ry., 6930 Eggleston Ave., Chicago, Ill.
Hartgering, Frances .....	Inst. Dom. Sci., Black Duck, Minn.
Hegdahl, Paul .....	Farmer, Bruce, Mont.
Heck, Emil .....	Civ. Eng., Oregon Agr. Col., Corvallis
Hofstetter, Clarence .....	Inst. Manual Training, St. Maries, Idaho
Knutson, Charlie O. ....	Electrician, Canby, Minn.
Legler, Edward V., Elec. Eng., 306 Campbell Ave., Schenectady, N. Y.	
Luebke, Esther .....	Inst. Domestic Science, Stevensville, Mont.
Persun, Francis J. E. ....	Inst. in Agr., Atwater, Minn.
Sexauer, Laura .....	Teacher, Brookings
Shepard, Albert D. ....	Chemist, Union Powder Co., Tarlin, N. J.
Slightam, Kate .....	Inst. in Dom. Science, Monroe, Wis.
Sherwood, Reginald .....	Asst. in Chemistry, S. D. S. C.
Sloan, Sam .....	Farmer, Brookings
Somers, Ruth (Haugen) .....	Brookings
Valentine, Vey .....	County Agr. Agt., Ft. Pierre
White, Henry D. ....	Supt. of Schools, Peever
Wilkins, Scott ....	Asst. in Agronomy, Iowa State Col., Ames, Iowa
Wood, Nina (Sloan) .....	Brookings
Wills, Ernest V. ....	Electrician, 2505 Mich. Ave. S., Chicago, Ill.

### PHARMACY GRADUATES

Eng, Julius .....	Pharmacist, Flandreau
Kadinger, Lewis .....	Pharmacist, Vienna
McDougal, Tyrell .....	Student, S. D. S. C.
Nelson, Lewis .....	Asst. in Zoology, S. D. S. C.
Ray, Winifred .....	Druggist, Aurora
Shaw, Albert J. ....	Pharmacist, Miller
Sivertson, Anna .....	Druggist, Pierpont

### Class of 1915

### MASTER OF SCIENCE

Binnewies, Edward .....	Asst. Prof. Chem., S. D. S. C.
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Shea, Morris Henry .....Chemist, Montana State College, Bozeman  
 Sherwood, Reginald .....Asst. in Chem., S. D. S. C.  
 Sloan, Samuel L. ....Farmer, Brookings  
 Mayland, George .....Farmer, Brookings

### BACHELOR OF SCIENCE

Bolland, Jens .....Farmer, Pierpont  
 Caldwell, Florence (Heck) .....Oregon Agr. Col., Corvallis, Ore.  
 Caldwell, Lacey .....Inst. in Agr., Park Rapids, Minn.  
 Clarke, Bruce .....Pharmacist, Pierre  
 Cooley, Hazel (Keddie) .....Bear Lake, Mich.  
 Culhane, Alexander .....Asst. State Dairy Inspector, S. D. S. C.  
 Culhane, James, Elec. Engineer .....  
 .....With Westinghouse Mfg. Co., Williamsburg, Pa.  
 Drury, Lillian .....Secretary, Chamberlain  
 Freeman, John .....Farmer, Rapid City  
 Gardner, Harry .....Instr. in Agr., State Normal, Spearfish  
 Gilbert, Gladys (Ortmayer) ..Care Park College, Washington, D. C.  
 Graham, William B. ....Farmer, Freeport, Minn.  
 Hale, Ruth .....Instr. in Dom. Sci., Fairchild, Wis.  
 Iverson, Carrold .....Asst. in Dairying, Iowa State College, Ames  
 Johnson, Carl J. ....With Briggs and Stratton Co., Milwaukee, Wis.  
 Jones, A. Patti .....Student, 1728 4th St., S. E., Minneapolis, Minn.  
 Keck, Dallas .....Instr. in Agr., Red Lake Falls, Minn.  
 Kremer, Frank .....Law Student, Univ. of Michigan, Ann Arbor  
 Lanphier, Ira ....Asst. Prof. Civ. Eng., U. of N. Mex., Albuquerque  
 Lynch, Arthur .....Stockman, State School, Redfield  
 Nixon, Jessie .....Teacher, St. Paris, Ohio  
 Nord, Florence .....Art Student, 6047 Ellis Ave., Chicago, Ill.  
 Pilmer, Miller .....With Des Moines Elec. Co., Des Moines, Ia.  
 Potter, Ernest C., Theological Student, Moody Bible Inst., Chicago  
 Serles, Earl R. ....Prof. of Pharmacy, S. D. S. C.  
 Wornson, Walter .....Medical Student, Milwaukee, Wis.

### PHARMACY GRADUATES

Abbott, Walter G. ....Pharmacist, Tyndall  
 Clark, Bruce E. ....Pharmacist, Pierre  
 Colliton, Ora A. ....Pharmacist, St. Paul, Minn.  
 Giannonatti, Elene .....Pharmacist, Ludlow  
 Haugen, Martin Bernhard .....Pharmacist, Hartford  
 Little, Guy Almond .....Druggist, Brandt  
 Loesch, William Patrick .....Druggist, Bruce  
 Olson, Edward Furness .....Pharmacist, Alcester  
 Randall, Harry Eugene .....Pharmacist, Arlington  
 Tolagson, Clarence Ferrold .....Pharmacist, Woonsocket

## Class of 1916

## MASTER OF SCIENCE

Bolland, Jens L. ....	Farmer, Pierpont
Gilbertson, Geo. L. ....	Asst. in Entomology, S. D. S. C.
Loomis, Howard ....	Asst. in Agronomy, S. D. S. C.
Morrison, Jos. D. ....	Agr. Expert, Highmore
Rilling, Harry E. ....	Asst. in Agronomy, S. D. S. C.
Sherwood, Reginald . . .	Asst. in Chemistry, S. D. S. C.

## BACHELOR OF SCIENCE

Abbott, Cleveland, Instructor in Dairying .....	
.....	Tuskegee Institute, Tuskegee, Ala.
Allison, Arthur ....	Electrician, With G. E. Co., Schenectady, N. Y.
Anderson, Georgia .....	Instr. Home Economics, Rapid City
Austin, Ethel .....	Instr. in Home Economics, Faulkton
Avery, Blanche .....	Instr. in Home Economics, Elgin, Ill.
Bergeim, Jos. ....	Principal High School, Lemmon
Caldwell, Kate .....	Instr. Home Economics, Dawson, Minn.
Calkins, Fred, ....	Electrician, With G. E. Co., Schenectady, N. Y.
Chapman, Daphne .....	Instr. Home Economics, Highmore
Dawes, Adelia .....	Instr. English and History, Fulton, S. D.
Dott, Delia .....	Instr. Home Economics, Sibley, Iowa
Evers, Clarence .....	2nd Lieut., U. S. A., Bigstone, S. D.
Fish, Warren D. ....	Mechanical Engineer, Ipswich, S. D.
Fridley, Harry .....	Farmer, Brookings
Fryer, Julia .....	Instr. Home Economics, Howard
Gold, Ralph .....	Electrician, With G. E. Co., Schenectady, N. Y.
Greene, Bernice .....	Instr. Home Economics, Falls City, Neb.
Greeves, Bertha .....	Instr. Home Economics, Velva, N. D.
Grudem, William, Electrician .....	
.....	With Westinghouse Mfg. Co., Wilkesburg, Pa.
Hanten, Matt .....	Farmer, Watertown
Heiser, Marie .....	Teacher, White
Humphrey, Francis .....	Teacher, Carthage
Jerlow, Morris .....	Prin. Twp. School, Bath
Johnston, Ralph E. ....	County Agr. Agent, Hot Springs
Kennard, Geo. ....	Instr. in Agriculture, Arnolds Park, Ia.
Knutson, Robt. ....	Instr. in Agr., Bigstone, S. D.
Lanphier, Eva .....	Instr. Home Economics, Montevideo, Minn.
Laxson, Leroy .....	Farmer, Hoven, S. D.
Lynch, Edw. ....	Instr. in Agr., Belle Fourche
Lynch, Ruth .....	Instr. in Science, Faulkton
Matson, Mamie .....	Instr. Junior College, Evansville, Wis.
Miller, Harold .....	Instr. in Zoology, S. D. S. C.
Mills, Erma Davis .....	Brookings
Nelson, Lewis E. ....	Instr. in Zoology, S. D. S. C.

Peterson, Harold, Electrician .....  
 .....With Westinghouse Mfg. Co., Wilkinsburg, Pa.  
 Rishoi, Alfred .....Asst. State Dairy Inspector, Brookings  
 Rowe, Chas. ....Asst. in Chemistry, S. D. S. C.  
 Rowe, Nellie .....Instr. Home Economics, Purdue Univ.  
 Schlatter, Chas. F. ....Prof. of Commercial Science, S. D. S. C.  
 Sheehan, Bernard F. ....Instr. in Agronomy, Iowa State Col., Ames  
 Slaatta, Emma .....Instr. Home Economics, Springfield, Minn.  
 Sloan, Janet .....Instr. in English, Castlewood  
 Smith, Homer ..Instr. in Pub. Speaking, Cornell Univ, Ithaca, N. Y.  
 Waltner, Benj. P. ....Farmer, Freeman, S. D.  
 Warner, Harry .....Instr. in Agronomy, Iowa State Col., Ames  
 Weber, Geo. ....Co. Agr. Agent, Alexandria  
 Wing, Leshar, Electrician, With E. Mich. Power Co., Jackson, Mich.

### PHARMACY GRADUATES

Anderson, A. Edward .....Student, S. D. S. C.  
 Burton, Starling .....S. D. N. G., Springfield  
 Corkhill, Clifford .....S. D. N. G., Hurley  
 Hemingway, Robt. W. ....Student, S. D. S. C.  
 Langdon, Hazel (Nelson) .....Student, S. D. S. C.  
 Lenocker, Paul .....Pharmacist, Brookings  
 Peterson, Edw. ....Pharmacist, With Spotts & Post, LeMars, Iowa  
 Rasmussen, Ethel .....Pharmacist, Watertown  
 Tabor, Floyd .....Pharmacist, Garretson, S. D.



# Student List

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## GRADUATE STUDENTS

Lynch, Arthur	Agriculture	Brookings
Nelson, Lewis	Education	Brookings
Rowe, Charles	Chemistry	Sioux Falls
Sanderson, Harry	Agronomy	Brookings
Serles, Earl R.	Chemistry	Salem

## COLLEGIATE STUDENTS

### SENIORS

Ainsworth, Ernest	Agr.	Brookings
Anderson, Eldon	Agr.	Pierre
Anderson, Leon	Agr.	Rapid City
Bennett, Lyle L.	G. S.	Canton
Browning, Lenore	G. S.	Brookings
Chappell, Mabel	H. E.	Brookings
Cunningham, Ray	G. S.	Conde
Cook, Orlan	E. E.	Clear Lake
Dakin, Norman	Agr.	Brookings
DeGreef, Charles	G. S.	Big Stone
Doughty, Walter	Agr.	White
Evans, Roy	C. E.	Brookings
Glennon, Daniel C.	Agr.	Huron
Gregory, Eva	H. E.	Alexandria
Heiser, Elizabeth	H. E.	White
Hill, Joe	Agr.	Mitchell
Holliday, Faye	H. E.	Brookings
Holliday, Lloyd	Agr.	Brookings
Jennings, Hollace	Agr.	Estelline
Johnson, Ralph	Agr.	Hetland
Jones, Horace	Agr.	Mitchell
Karlstad, Charles H.	Agr.	Dempster
Keating, Pearl	H. E.	DeSmet
Kopperud, Harmon	Agr.	Lake Preston
Lanphier, Harriett	H. E.	Brookings
Lee, Vera	H. E.	Brookings
Lothrop, Orlin	E. E.	Academy
McCoy, Dell	C. E.	Miller
Malone, Robert	C. E.	Huron
Miller, Henry J.	E. E.	Hudson

Mills, Omer	Agr.	Wall
Nelson, Mrs. Hazel	Py.	Brookings
Nickerson, Mary	Py.	Brookings
Nord, Daisy	H. E.	Brookings
Petersen, Axel	Agr.	Sioux Falls
Rudd, Charles	E. E.	Orient
Severson, Florence	H. E.	Brookings
Shaw, Happy	H. E.	Madison
Sherwood, Aubrey	Agr.	DeSmet
Skinner, Cecil	Agr.	Brookings
Sloan, Lyle	E. E.	Alexandria
Smith, Harry	C. E.	Miller
Stevens, Leo	C. E.	Sioux City, Ia.
Stoddart, Mattie	H. E.	Brookings
Styer, Clarence	C. E.	Huron
Swenchart, Millie	H. E.	Brookings
Swift, Eugene	Agr.	Brookings
Voss, Edward	G. S.	Garvin, Minn.
Wagner, Colman	Agr.	Selby
Waltner, Adolph	Agr.	Freeman
Waltner, Caroline	H. E.	Freeman
Wattson, Donald	Agr.	Chamberlain
Westgate, Louis	Agr.	Adrian, Mich.
Winright, George	Agr.	Alexandria
Ziegler, Arlene	H. E.	Brookings

## JUNIORS

Ahlrs, Naomi	G. S.	Webster
Anderson, Adlai	Agr.	Mitchell
Aney, Roy	Agr.	Peever
Bacon, Grace (Lynch)	H. E.	Brookings
Beals, Edna	H. E.	Brookings
Berglind, Axel	Agr.	Brookings
Blakely, Clifford	G. S.	Brookings
Boswell, Mildred	H. E.	Castlewood
Bulger, Jacob	Agr.	White
Bunday, Ray	G. S.	Brookings
Cable, Franzella	H. E.	Hudson
Caldwell, Jessie	H. E.	Brookings
Clark, Esther A.	H. E.	Faulkton
Collinge, Vernie	Agr.	Sturgis
Coughlin, Thomas	Agr.	Carthage
Dewing, Sara	H. E.	Brookings
Dibble, Robert	G. S.	Beresford
Dokter, Garrett	Agr.	Andover
Drury, Joseph	Agr.	Chamberlain
Emerson, William	E. E.	Castlewood
Evans, Margaret	H. E.	Brookings

Frease, Hazel	H. E.	Brookings
Frease, Kathryn	H. E.	Brookings
Gaylord, Claire	G. S.	Brookings
Giannonatti, Elene	Py.	Brookings
Gilbert, Charles	Agr.	Clark
Goddard, Bertin	G. S.	Hot Springs
Greeves, Ida	H. E.	Miller
Gretschmann, Anna F.	H. E.	Springfield
Grinols, Mavis	H. E.	Brookings
Grinols, Violet	G. S.	Brookings
Hanson, Hazel	G. S.	Brookings
Hemingway, Robert	Py.	Mattoon, Wis.
Hewett, Howard	Agr.	Arlington
Hood, Kenneth	Agr.	Groton
Hoon, Glenn	Agr.	Kadoka
Hoover, Harold	Agr.	Brookings
Hough, Orilla (Sherwood)	H. E.	Brookings
Hutchinson, Ethel	H. E.	Webster
Hyde, Hara	G. S.	Brookings
Johnson, Ira S.	Agr.	Miller
Laird, Walter S.	E. E.	Salem
Lasell, Leola	G. S.	Waubay
Lawlor, Joe	C. E.	Miller
Layson, S. V.	Agr.	Millersburg, Ky.
Lister, Paul B.	Agr.	Bixby
McDougall, Tyrell	Py.	Britton
McFadden, Edgar	Agr.	Webster
Mathews, Hubert	G. S.	Brookings
Mathieson, Homer	Agr.	Watertown
Michaels, Ernest	C. E.	Watertown
Miller, Arthur	Agr.	Madison
Mills, Oscar	Agr.	Wall
Pickett, H. Hubbie	E. E.	Brookings
Pier, Lenora	H. E.	Woonsocket
Randall, Elizabeth	H. E.	Brookings
Reid, Phyllis	H. E.	Castlewood
Revell, James	Agr.	Brookings
Riis, Jens	Agr.	Brookings
Rilling, Elsie	H. E.	Brookings
Simons, Stella	H. E.	Castlewood
Smith, Chester	G. S.	Egan
Steensland, Theodore	Agr.	Beresford
Stevens, Florence	H. E.	Redfield
Thelin, Guy	Agr.	Sioux Falls
Tompkins, Arthur	Agr.	Brookings
Urton, Raymond	Agr.	Fulton
Ustrud, Ida	H. E.	Watertown

Webb, Grace	G. S.	Arlington
Woodruff, Lewis	Agr.	Wessington
Woodruff, Victor	G. S.	Miller

### SOPHOMORES

Alberty, Joseph	Agr.	Parker
Aldrich, Dorothy	G. S.	Big Stone
Allen, Edna	H. E.	DeSmet
Anderson, Leslie	G. S.	Brookings
Andrews, Daisy	H. E.	Highmore
Atkinson, Ray	G. S.	Brookings
Austin, Guy	Agr.	Brookings
Ayer, Horace M.	G. S.	Vermillion
Bacon, Lula Mae	H. E.	Gettysburg
Bakke, Benjamin	E. E.	Howard
Bastian, Elias D.	Agr.	Frankfort
Bergeim, Frank	G. S.	Brookings
Bergstresser, Grant G.	E. E.	Wentworth
Bissell, William E.	Py.	Irene
Boehmer, J. Willis	Agr.	Fulton
Brenner, Ivan	Agr.	Canton
Browne, Barnard	Agr.	Mitchell
Brown, Cecil	Agr.	Brookings
Browning, Albert	G. S.	Brookings
Bryant, Gladys	H. E.	Andover
Bucholz, Rudolph	Agr.	Brookings
Cannon, Kittie	H. E.	Woonsocket
Carlisle, Frances	H. E.	Brookings
Carroll, William C.	Agr.	Huron
Cole, Lynn	G. S.	Brookings
Coplan, Max	Agr.	Watertown
Cordiner, Waneta	H. E.	Clear Lake
Crawford, Dell	Py.	Rochester, Minn.
Crofoot, Mentha	G. S.	Webster
Crofoot, Vanita	H. E.	Webster
Dahl, Clarence	Py.	Langford
Daniels, Blair	H. E.	Ipswich
Danielson, Percy	Agr.	Hendricks, Minn.
Dawson, Thomas	Agr.	Hawarden, Ia.
Dibble, Paul G.	G. S.	Beresford
Dokter, John	Agr.	Andover
Dunn, John F.	Agr.	Ann Arbor, Mich.
Erp, Earl	Agr.	Canton
Faulkner, Drew	M. E.	Burkmere
Fenn, Leonard	Agr.	Brookings
Ferd, Lucile	Py.	Davis
Gilbert, Paul	Agr.	Rochester, Minn.
Gloeckler, William	G. S.	Menno

Gooch, Wilbur	G. S.	Brookings
Green, Carroll	G. S.	Brookings
Halvorson, Harry	Agr.	Brookings
Healy, Roger	Agr.	Langford
Holm, Olga	G. S.	Webster
Hoyt, Lloyd	Py.	DeSmet
Huchendorf, Clara	H. E.	Brookings
Hurlbert, Roy	Agr.	Raymond
Hutchinson, Florice	H. E.	Webster
Hutton, Lynn	Agr.	Egan
Irish, Edith	H. E.	Brookings
Jackson, Clark	E. E.	Dell Rapids
Johnson, Gustaf	Agr.	Lake Norden
Kennedy, Benjamin	G. S.	Canton
Kirk, Louise	H. E.	Springfield
Langdon, Floyd	Agr.	Clear Lake
Larsen, Ora	H. E.	Brookings
LeCocq, Marion	Agr.	Harrison
Linn, Lela	Music	Brookings
McDougall, Portia	G. S.	Britton
Marshman, Clinton	C. E.	Brookings
Mills, Fern	H. E.	Wall
Mitchell, Arthur	G. S.	Brookings
Morton, Joy	H. E.	Brookings
Nelson, Edmund	G. S.	Estelline
Nelson, Ineta	H. E.	Dell Rapids
Nielson, Arthur	Py.	Rapid City
Olson, Florence	H. E.	Webster
Overturf, William	Py.	Doland
Peterson, Orvis	Agr.	Brookings
Peterson, Ruth	G. S.	Brookings
Potter, Earl	E. E.	Carthage
Randall, Pearl	H. E.	Brookings
Reedy, Ernest	Agr.	Beresford
Robbins, Walter	Agr.	Carthage
Rottluff, Karl	Py.	Sioux Falls
Sanders, B. Harry	Py.	Garretson
Schad, Ernest	Py.	Appleton, Minn.
Scott, Millard	Sec.	Artesian
Seubert, Wilbur	Agr.	Brookings
Shaw, Inez	H. E.	Estelline
Shepard, James	G. S.	Brookings
Shinn, Elvin	E. E.	Carthage
Skiff, Hazel	H. E.	Brookings
Somers, Esther	H. E.	Brookings
Spurling, Dorothy	H. E.	Brookings
Stevenson, J. Lee	Agr.	Vermillion



Sunde, Conrad J. ....	Agr. ....	Sisseton
Swenehart, Delmer ....	G. S. ....	Brookings
Thomas, Loyall ....	Agr. ....	Ames, Iowa
Thompson, Albert ....	Py. ....	Brookings
Tilley, Martha ....	G. S. ....	Spencer
Valentine, George ....	Agr. ....	White
Van Dervoort, Harvey ....	Agr. ....	Milbank
Walker, Jay F. ....	E. E. ....	Carthage
Walpole, Robert ....	Py. ....	Springfield
Walseth, Edwin T. ....	G. S. ....	Clear Lake
White, Helen ....	G. S. ....	Woonsocket
Wiles, Glenn ....	E. E. ....	Trent
Williams, Clayton ....	E. E. ....	Lake Preston
Wilson, Bliss ....	Py. ....	Frankfort
Wood, Laura ....	H. E. ....	Brookings
Wood, Milton ....	Agr. ....	Brookings
Yeamans, Bessie ....	H. E. ....	Vienna

## FRESHMEN

Allison, Andrew ....	E. E. ....	Huron
Anderson, Alvia ....	H. E. ....	Brookings
Andrews, Walter ....	G. S. ....	DeSmet
Arneson, Anna ....	G. S. ....	Garretson
Atwater, Effie ....	H. E. ....	Redfield
Austin, Elbert ....	M. E. ....	Brookings
Bacon, Mabel ....	H. E. ....	Brookings
Baker, Frances ....	H. E. ....	Brookings
Bartlett, Elsie ....	Sec. ....	Brookings
Basart, Victor ....	Agr. ....	DeSmet
Bickel, Eva ....	H. E. ....	Watertown
Biggar, George ....	Agr. ....	Brookings
Bird, Charles L. ....	Py. ....	Doland
Bottum, George ....	G. S. ....	Tulare
Boyden, Lewis ....	Agr. ....	Academy
Brown, Leslie ....	Agr. ....	Walker, Mo.
Caldwell, Genevieve ....	H. E. ....	Brookings
Caldwell, Lyman ....	Agr. ....	Brookings
Campbell, Horace ....	G. S. ....	Brookings
Carey, Herbert ....	Py. ....	Bryant
Carlson, William B. ....	Sec. ....	Chamberlain
Chappell, Genevieve ....	H. E. ....	Brookings
Chase, Elizabeth ....	H. E. ....	Brookings
Chenoweth, Grace ....	H. E. ....	Brookings
Clarke, Richard ....	Py. ....	Northville
Cole, Olive ....	Musie ....	Brookings
Colfix, Marie P. ....	H. E. ....	Fulton
Conklin, Lloyd ....	M. E. ....	Yankton

Cornwell, Floyd M.	Py.	Salem
Crutchett, Ralph	M. E.	Armour
Culhane, Charles	Agr.	Brookings
Curtis, Gertrude	H. E.	Lead
Dalthorp, Charles	G. S.	Volga
Danielson, Sidney	Agr.	Hendricks, Minn.
Day, Helen	H. E.	Clark
Doolittle, Edith	H. E.	Ipswich
Ekse, Ingvald	M. E.	Hendricks, Minn.
Engstrom, Edward	Agr.	Redfield
Evans, Mae	Music	Garden City
Fairchild, Harry N.	Py.	Bryant
Faulkner, James	C. E.	Burkmere
Fenner, Walter	Agr.	Milbank
Flittie, Agnes	H. E.	Brookings
Frease, Helen	H. E.	Brookings
Fryer, Florence	G. S.	Doland
Gardner, Richard	Agr.	Sioux Falls
Gilkerson, David	Agr.	Armour
Graves, Charles	Agr.	Ashton
Haahr, Erwin H.	E. E.	Sioux Falls
Hansen, Eva	H. E.	Brookings
Hansen, Philip	Agr.	Brookings
Harris, Dean	C. E.	Groton
Hartung, Ralph	Agr.	McLaughlin
Hawley, Errol R.	Agr.	Sioux Falls
Haynes, A. L.	Agr.	Scotland
Haynes, Mrs. A. L.	H. E.	Scotland
Hemmer, Matt	G. S.	Aurora
Hermanson, Peter	G. S.	Tyler, Minn.
Hubbard, J. Fay	E. E.	Groton
Huchendorf, Ina	H. E.	Brookings
Hughes, Dudley A.	Py.	Plankinton
Huntimer, Marie	H. E.	Colton
Huyck, Esther Mae	G. S.	Gettysburg
Irish, Margaret	G. S.	St. Louis, Mo.
Jerde, Delbert	M. E.	Brookings
Johnson, James	C. E.	Pierpont
Johnson, Oreat	G. S.	Brookings
Jones, Mary	G. S.	Brookings
Keck, Myrtle	H. E.	Brookings
Keegan, Elizabeth	H. E.	Watertown
Kidman, Bert	Agr.	Vienna
Lanphier, Grace	H. E.	Brookings
Lehner, Mae	Sec.	Brookings
Lien, Ruby	H. E.	Brookings
Lindley, Robert T.	G. S.	Bonesteel

Long, Helen	H. E.	Webster
Lorshbough, Mabel	H. E.	Clark
McMillan, Lloyd	E. E.	Conde
McNamara, William	Py.	Hazel
Masters, George E.	G. S.	Spencer
Minier, Earl	G. S.	Brookings
Montgomery, Vera	H. E.	Fulton
Moon, Ralph	M. E.	Yankton
Moore, Maurine	Music	Woonsocket
Morrow, Madge	H. E.	Brookings
Munro, Carol	H. E.	Wilmot
Neseth, Minda	G. S.	Menomonie, Wis.
Noonan, Genevieve	G. S.	Frankfort
Norman, Margaret	Music	Windom, Minn.
Olson, Angle	H. E.	Brookings
Olson, Clarence	Agr.	Brookings
Olson, Lawrence	Agr.	Brookings
Onstine, Everett	Agr.	Flandreau
Peck, Clifford	Agr.	Hazel
Peddicord, Susie	H. E.	Brookings
Pittenger, William	Py.	Aurora
Pope, Clarence C.	Agr.	Miles City, Mont.
Rohrbach, Lulu Grace	H. E.	Clark
Roos, John	Py.	Tulare
Sacre, Carl	Agr.	Interior
Safford, Harold	Agr.	Aberdeen
Schultz, Myrtle	G. S.	Brookings
Sheldon, Rachel	H. E.	Brookings
Sloan, Grace	H. E.	Brookings
Smith, Carleton	Agr.	Storm Lake, Ia.
Smith, Clarence	Agr.	Henry
Smith, Harold	Agr.	Spearfish
Solberg, Harry	M. E.	Brookings
Staley, James	Py.	Clear Lake
Stark, Elsie	H. E.	Unityville
Street, Thomas	Agr.	Albee
Swab, Grace	H. E.	St. Lawrence
Swift, Cecile	H. E.	Brookings
Tarbell, Sarah	H. E.	Watertown
Tiahrt, Jacobina	H. E.	Dolton
Tompkins, Blanche	H. E.	Brookings
Trenner, Ephraim	Agr.	Cash
Troyer, John A.	Agr.	Lennox
Trumm, Archie	Py.	Hayti
Turner, Verne	Py.	Brookings
Turner, Virgil	G. S.	Brookings
Underwood, Paul	Agr.	Willow Lakes

Vollmer, Louis W. ....	E. E. ....	Brentford
Walseth, Russell ....	Agr. ....	Clear Lake
Walton, Idella ....	H. E. ....	Castlewood
Warner, Fay ....	Agr. ....	Clear Lake
Waters, Harley ....	E. E. ....	Wentworth
White, Clarence ....	Agr. ....	Clark
Whitmus, Walter ....	G. S. ....	Brookings
Williamson, Irving M. ....	G. S. ....	Watertown
Wilson, Wayne ....	E. E. ....	Doland
Wix, Margaret ....	H. E. ....	Brookings
Wolber, Oscar ....	G. S. ....	Brookings

### SPECIALS

Blakely, Mrs. C. H. ....	Art ....	Brookings
Bober, Samuel ....	Agr. ....	Newell
Clinesmith, Abbie ....	H. E. ....	Sioux Falls
Downs, Myra ....	G. S. ....	Brookings
Gilbertson, Gurina ....	Art ....	Brookings
Gilbertson, Mary ....	Art ....	Brookings
Layson, Mrs. Nellie ....	Music ....	Brookings
Lindley, John ....	M. E. ....	Bonesteel
Nickerson, Ernest ....	G. S. ....	Brookings
Titmarsh, Ruth ....	G. S. ....	Denver, Colo.

## PREPARATORY STUDENTS

### FOURTH YEAR

Beals Daniel ....	Brookings
Bierman, Chris ....	Mansfield
Bjerke, Elmer ....	Andover
Burleigh, Ruby ....	Estelline
Doner, David ....	Brookings
Eidam, Marshall ....	Forest City
Enke, Lou ....	Verdi, Minn.
Hansen, Ross P. ....	Brookings
Hast, Mary ....	Bruce
Keck, Marvin ....	Brookings
Knuth, Coral ....	Estelline
Lockwood, Howard ....	Chamberlain
Loken, Emma ....	Faultkton
McKillop, Frank ....	Canistota
McNerney, Leo ....	Huron
Nord, Alfred ....	Milbank
Plagens, Matie ....	Garden City
Pollard, Mabel V. ....	Estelline
Spaulding, Anna ....	Flandreau
Steele, Nellie ....	White Rock
Wiley, Mary ....	Highmore

Wilson, Edith .....	Brookings
Wilson, Madge .....	Brookings

**THIRD YEAR**

Case, Larue .....	Watertown
Hollenbeck, Henry .....	Glenham
Houghton, Westina .....	Brookings
Kopland, David .....	Brookings
Loken, Emma .....	Faulkton
Mallery, Norris .....	Redfield
Merriman, Grace .....	Carpenter
Miller, Mary (Odland) .....	Brookings
Peterson, Mildred .....	Firesteel
Pope, Elmer .....	Glendive, Mont.
Porter, Paul .....	Onida
Rexford, Belva .....	Aurora
Rothschild, Donald .....	Madison
Sanders, Cecilia .....	Brookings
Sculley, Jesse .....	West Frankfort, Ill.
Weaver, Frank .....	Vera
Wright, Pearl .....	Aurora

**SECOND YEAR**

Alger, Edward .....	Custer
Allibone, John A. ....	Centerville
Carson, Donald .....	Bradley
Christofferson, Anna .....	Lake Preston
Enke, Rosa .....	Verdi, Minn.
Forsee, Zeta .....	Brookings
Halverson, Gerhard .....	Brandt
Halverson, Walter .....	Brandt
Harlan, Theron .....	Vera
Hinkle, Lillie .....	Brookings
Houghton, Louis .....	Brookings
Hullinger, Artie .....	Vera
Knudson, Sigurd .....	Carthage
Long, Jessie .....	Webster
Rude, Ida .....	Brookings
Seagreen, Olive .....	Turton
Spilde, Gertie .....	Willow Lakes
Thayer, Minnie .....	Brookings
Vik, Kalmar .....	Dell Rapids
Wik, Victor .....	Millard

**FIRST YEAR**

Barthelmess, Marie .....	Brookings
Coughlin, Joseph .....	DeSmet



Drange, Ella	Decorah, Ia.
Dreyer, Jason	Brookings
Flatten, Silas	Colman
Forby, Ellis H.	Onaka
Hanson, William B.	Brookings
Harvey, Vernon	Brookings
Heggen, Iva	Garretson
Judson, Elizabeth	New Underwood
Lawrence, James	Yale
Long, Gordon	Webster
Lovell, Everett	Bryant
Lund, Trygve	Bradley
Muller, Robert	Avon
Olson, Luella	Brookings
Plumb, Olive	Brookings
Poole, Floyd	Brookings
Poole, John	Brookings
Schultz, Elsie	Elkton
Shoop, Milo	Spencer

## MUSIC STUDENTS

Anderson, Thyra	Piano, Voice	Hetland
Aldrich, Dorothy	Piano	Big Stone City
Andrews, Walter	Horn	DeSmet
Baker, Delilah	Voice	Aurora
Basart, Victor	Horn	DeSmet
Bickel, Eva	Piano	Watertown
Bjerke, Elmer	Clarinet	Andover
Beehner, Gertrude	Voice	Verdi, Minn.
Bouzek, Benjamin	Violin	Highmore
Brenner, Ivan	Voice	Canton
Caldwell, Lyman	Horn	Brookings
Cannon, Kittie	Piano	Woonsocket
Carrington, David	Clarinet	Mt. Vernon
Carson, Charlotte	Violin	Bradley
Carson, Lloyd	Trombone	Bradley
Cole, Olive	Voice	Brookings
Colfix, Marie	Voice	Fulton
Cordiner, Waneta	Piano	Clear Lake
Curtis, Gertrude	Piano	Lead
Daker, Mildred	Piano	Houghton
Day, Helen	Piano	Clark
Doolittle, Edith	Piano	Ipswich
Doner, David	Trombone	Brookings
Eldridge, Joe	Voice	Brookings
Erickson, Leon	Flute	Montrose
Evans, Mae	Piano, Voice	Garden City

Fairchild, Harry	Clarinet	Bryant
Fenner, Walter	Horn	Milbank
Fryer, Florence	Flute, Voice	Doland
Gates, Mary	Piano	Brookings
Gilbert, Charles	Saxophone	Clark
Gilkerson, David	Trombone	Armour
Gloeckler, Wm. A.	Violin	Menno
Goddard, Bertin	Voice	Hot Springs
Grindberg, Anna	Piano	Trent
Grindberg, Valdine	Piano	Trent
Halverson, Gerhard	Clarinet	Brandt
Hanson, Leslie	Voice	Bridgewater
Heggen, Iva	Piano	Garretson
Hermanson, Peter	Cornet	Tyler, Minn.
Hewett, Howard	Piano	Arlington
Hiscox, Faye	Piano	Montrose
Houghton, Louis	Violin	Brookings
Houghton, Westina	Piano	Brookings
Howg, Emil T.	Cornet	Sisseton
Huyck, Esther	Piano, Voice	Gettysburg
Johnson, Henry	Voice	Hurley
Johnson, Hilda	Piano	Sherman
Johnson, Oreat	Piano	Brookings
Johnson, Vera	Piano	Balaton, Minn.
Jones, Mary	Piano	Brookings
Judson, Elizabeth	Piano	New Underwood
Keating, Pearl	Piano	DeSmet
Keck, Myrtle	Voice	Brookings
Kelty, Frank S.	Piano	Plankinton
Kieth, Mark	Trombone	Armour
Knox, Charles B.	Clarinet	Binder
Lauphler, Harriet	Voice	Brookings
Layson, Nellie	Voice, Piano	Brookings
Linn, Lela	Voice, Piano	Brookings
Lund, Agnes	Piano, Violin	Dawson, Minn.
McDougall, Portia	Piano, Voice	Britton
Mahany, Max M.	Piano	Brookings
Miller, Mary (Odland)	Piano	Brookings
Moore, Maurine	Piano, Voice	Woonsocket
Moorhouse, Lorenda	Piano	Watertown
Montgomery, Vera	Voice	Fulton
Morton, Joy	Piano	Brookings
Nelson, Helene	Piano	Tyler, Minn.
Nichols, Elva	Piano	Westbrook
Noonan, Genevieve	Piano, Voice	Frankfort
Norman, Margaret	Piano, Voice	Windom, Minn.
Odland, Lawrence	Voice	Hurley

Paul, Eva	Piano	Doland
Peddicord, Susie	Piano	Brookings
Peterson, Ella	Piano	Viborg
Pier, Lenora	Voice	Woonsocket
Plucker, Anna	Piano	Lennox
Putzke, Lawrence	Violin	Humboldt
Quincey, Ralph	Violin	Sioux Falls
Randall, Pearl	Piano	Brookings
Rebrud, Walter	Trumpet	Ipswich
Rexford, Belva	Voice, Piano	Aurora
Rohrbach, Lulu Grace	Piano	Clark
Rovang, Albert	Cornet	Bryant
Rundell, Howard	Saxophone	Hurley
Schubert, Atlee	Violin	Academy
Seagreen, Olive	Piano	Turton
Seubert, Wilbur	Piano	Brookings
Schad, Ernest	Violin	Appleton, Minn.
Shoop, Milo	Piano, Cornet	Spencer
Skiff, Hazel	Piano	Brookings
Slocum, George A.	Violin	Glenham
Spaulding, Anna	Piano	Flandreau
Spilde, Gertie	Piano	Willow Lakes
Stark, Elsie	Piano	Unityville
Stitt, Lyle	Violin	Hitchcock
Suttinger, Valentine	Piano	Delmont
Swift, Cecile	Voice	Brookings
Thayer, Minnie	Piano	Brookings
Urton, J. Raymond	Saxophone	Fulton
Wiley, Mary	Piano	Highmore
Wilson, Madge	Piano	Brookings
Witzel, Roy	Piano	Brookings
Wix, Margaret	Piano	Brookings
Wright, Pearl	Piano, Voice	Aurora
Wyant, Frank	Voice	Reliance

## SCHOOL OF AGRICULTURE

### FOURTH YEAR

Anderson, Ida	Tulare
Andreessen, Cornelius	Tea
Bakke, Elmer	Webster
Belk, Vernon	Henry
Bishop, Julius	Montrose
Bjerke, Elmer	Andover
Brown, A. Roy	Yankton
Carley, Robert	Embarrass, Wis.
Crisler, Kenneth	Harrisburg

Corothers, John	Clear Lake
Crisman, Leo B.	Armour
Doner, David	Brookings
Dvorak, Frank	Redfield
Frandsen, Josephine	Brookings
Halvorson, Alma	Kenneth, Minn.
Hawes, Hazel	Sherman
Hawes, Belle	Sherman
Holmes, Clara	Brookings
Janssen, George	Castlewood
Knudson, Anna B.	DeSmet
McFadden, Joseph	Huron
McMahon, Russell	Bruce
Moen, Lewis	Effington
Moyle, Edwin	Westport
Neyhart, Helen	Gorman
Nord, Alfred	Milbank
Paulson, Joseph	Brandt
Peterson, P. D.	Virgil
Peterson, William	Lily
Rundell, Alta	Hurley
Rundell, Howard	Hurley
Rundell, Leslie	Hurley
Scott, Lester	Clark
Sloat, Judd	Lowry
Sloat, Ora	Lowry
Smith, Joseph	Sioux Falls
Sueltz, Arthur	Groton
Vearrier, Maude	Virgil
Wolverton, Don	Doland

### THIRD YEAR

Ackley, Bliss	Bryant
Andrews, Freeman	Lake Andes
Bapp, William E.	White Rock
Bierman, George	Mansfield
Brown, Carl G.	Lucas
Bush, Emmit	Colome
Corothers, James	Clear Lake
Crisman, Roy	Armour
Hanson, Albert	Elk Point
Hoogshaugen, William	Parker
Jensen, James	Erwin
Knox, Charles	Binder
Merriman, Arthur	Carpenter
Neyhart, Earl	Gorman
Peppers, Gale	Groton
Petry, Kathryn	Hawarden, Ia.

Putzke, Edna	Humboldt
Putzke, Lawrence	Humboldt
Ravndal, Gerald B.	Lead
Robbins, Albert	Spencer
Shult, Raymond	Doland
Stitt, Carroll	Hitchcock
Stitt, Harold	Hitchcock
Swenson, Alfred	Ethan
Tate, Chester	Brookings
Tate, May	Brookings
Wolters, Arnold	Winfred
Worden, Winnie	Brookings

## SECOND YEAR

Aldrich, Leta	Doland
Anderson, Thyra	Hetland
Bailey, Lynn G.	Clark
Bereman, Miriam	Gary
Bratager, Ernest	Sioux Falls
Carlisle, Agnes	Lake Benton, Minn.
Carson, Charlotte	Bradley
Carson, Lloyd	Bradley
Chicoine, Benjamin	Jefferson
Christensen, Ada	Center Point
Daker, Paul	Houghton
Eggen, Peter	Sisseton
Exe, Inga	Brookings
Fasbender, Benjamin	Hendricks, Minn.
Fasbender, Leo	Hendricks, Minn.
Fees, Burton	Cottonwood
Flynn, Leo	Montrose
Hermanson,, Jimmie	Sherman
Herried, Ernest	Summit
Holland, Willis E.	Northville
Houg, Emil T.	Sisseton
Johnson, Eugene	Brookings
Johnson, Florence	Brookings
Kemink, Harry M.	Castlewood
Killian, Ward V.	Vilas
King, Esther	Brookings
Linka, John	Tyndall
Metz, Ervin	Miranda
Meyer, Chas. A.	Cavour
Moorhouse, Lorenda	Watertown
Morrison, Charley	South Shore
Nichols, Elva A.	Westbrook



Odland, Lawrence	Hurley
Opdycke, Percy	Frederick
Paul, Nina	Doland
Paulson, Signus	Lily
Pederson, Angetta	Gayville
Peterson, Earl	Sioux Falls
Peters, Dorothy	Granville, Ia.
Piper, Albert	Carpenter
Priest, Lloyd	Dalzell
Rebrud, Walter	Ipswich
Rovang, Isabella	Bryant
Runstad, Hiram	Mt. Vernon
Schmidt, Fred	Alpena
Stegeberg, Earl	Woonsocket
Stormo, James	Hazel
Strunk, Arthur	Irene
Suttinger, Valentine	Delmont
Tjaden, Sam	Harrisburg
Walker, Harry	Tripp
Williamson, Garrett	Plankinton
Woodford, George	Mansfield
Wright, George	Artesian
Wudel, Emanuel	Parkston

### FIRST YEAR

Aldrich, Merton	Big Stone City
Allison, Lucy	Volga
Apland, Ellsworth	Oldham
Bailey, Hugh L.	Keldron
Beatty, Richard	Elrod
Bentley, Rachel	Bryant
Bevington, Herbert	Highmore
Bouzek, Ben M.	Highmore
Boyden, Louis	Academy
Breachel, John	Mound City
Brown, Eldon	Bradley
Beehner, Gertrude	Verdi, Minn.
Buller, Henry W.	Parker
Burgess, Mrs. Loyse	Brookings
Burgi, Carl	Yankton
Butterfield, Warren E.	Parker
Buus, Jens	Wagner
Caldwell, Charles W.	Wolsey
Chrisler, Claude	Harrisburg
Christensen, Bert	Viborg
Christensen, Marie	Viborg
Clinesmith, Abbie	Sioux Falls
Cook, Donald	Plankinton

Crane, Lloyd	Ramona
Crisman, Fay M.	Armour
Crouch, John W.	Tracy, Minn.
Crowell, Alfred	Brookings
Daker, Mildred L.	Houghton
Dana, Charles M.	Armour
De Rue, Ida	Sherman
De Witte, Ellsworth	Holabird
Dybdahl, Julian	Brookings
Dybdahl, Lillian	Brookings
Erickson, Leon	Montrose
Erskine, Roy	Sioux Falls
Fairley, J. Vern	Gayville
Fletcher, Everett A.	Garden City
Flisrand, William	Florence
Frybarger, John Leonard	Wayside, Neb.
Gale, Veo H.	Farmingdale
Gilman, Howard E.	Mission Hill
Gleeson, Frederick	Mitchell
Green, David O.	Highmore
Grindberg, Anna	Trent
Grindberg, Valdine	Trent
Gunderson, Jerome	Yankton
Hamilton, L. B.	Stratford
Hanson, Leslie	Bridgewater
Hanson, Victor	Vermillion
Harlan, Theron	Vera
Harper, Bert T.	Hurley
Haugen, Clara M.	Brookings
Hayes, Hobart M.	Parker
Hetland, Conrad	Montrose
Hiscox, Faye	Montrose
Hobbie, Sophie	Flandreau
Houghton, Lewis	Brookings
Hullinger, Artie	Vera
Inglis, Palmer	Wessington Springs
Jensen, Corliss C.	Farmingdale
Johnson, Clifford	Gayville
Johnson, Hilda	Sherman
Johnson, Floyd	Arlington
Johnson, Vera	Balaton, Minn.
Keck, Harley	Phillip
Keith, Mark	Armour
Knickrehm, Harry	Carpenter
Kozel, Royal L.	Blunt
Kringen, Alma M.	Sherman
Kuehn, Bert	Arlington

Leach, Ralph	Ree Heights
Le Lacheur, John	Sisseton
Longman, Wilford	Toronto
Lunda, Leonard	Chancellor
Lundeen, Florence	Aurora
Lyons, Alvin	Agar
McCormick, Frank	Doland
McWhirter, Wilson	Vivian
Markve, Carl	Ortley
Mathieson, Donald	Philip
Merry, Lyman George	Dell Rapids
Millage, Joseph	Mitchell
Nelson, Helene M.	Tyler, Minn.
Nelson, Lawrence	Geddes
Nelson, Lawrence R.	White Rock
Nelson, Metha	Gayville
Palmgren, John	Hot Springs
Parcella, Mabel	Balaton, Minn.
Paul, Eva Ada	Doland
Paulson, Gustav	Centerville
Payne, Harlan W.	Woonsocket
Peterson, Ella A.	Viborg
Plucker, Anna	Lennox
Powers, Robert	Delmont
Prouty, Forde	Hayti
Prouty, Ole F.	Hayti
Quincey, William A.	Sioux Falls
Reinecke, Bryan	Seneca
Roll, Eugene	Oral
Rose, C. Delbert	Wagner
Rovang, Albert	Bryant
Rudy, Charles	Cavour
Schmidt, Lilly	Alpena
Schubert, Atlee	Academy
Skerl, Rudolph	Lake City
Scott, Louis	Lake Andes
Sebion, Tdwin	Webster
Segard, Henry	Mission Hill
Selix, Roy	Brookings
Shult, Milton	Doland
Shult, Myrtle	Doland
Sloat, Everett	Gettysburg
Sloat, May	Lowry
Sloat, May	Loowry
Slocum, Arthur I.	Glenham
Slocum, George	Glenham
Smidt, Thorvald	Freeman

Smith, Darwin .....	Sioux Falls
Snow, Francis C. ....	Vermillion
Sorenson, Sarah .....	Arlington
Spicer, Clarence C. ....	Wessington
Spicer, Lawrence .....	Wessington
Steen, Edward .....	Brookings
Stites, Orville .....	Brookings
Stitt, Lysle .....	Hitchcock
Stormo, Albert .....	Hazel
Sundet, Philip .....	Brookings
Swanson, Otto .....	Pukwana
Swanson, Chester .....	Pukwana
Taylor, Norman .....	Fort. Pierre
Telkamp, Ernest .....	Brookings
Thompson, Oscar B. ....	Springfield
Tjaden, George .....	Harrisburg
Todd, Florence .....	Canton
Trumble, Albert .....	Okobojo
Verdin, Jennie .....	Irene
Waltner, John P. ....	Freeman
Ward, Howard .....	Northville
Westergaard, Bertha .....	Viborg
Willcuts, B. Russell .....	Millboro
Williamson, Clifford .....	Artesian
Wright, Warren .....	Valley Springs
Wyant, George F. ....	Reliance

## SUMMER SCHOOL

1916

Aaron, Annabelle .....	Arlington
Adams, Florence .....	Castlewood
Alrick, Lee .....	Brookings
Anderson, Laura .....	Vilas
Anderson, Leon .....	Rapid City
Anderson, Nellie .....	Bryant
Arneson, Constance .....	Oldham
Arneson, William .....	Oldham
Arvidson, Mae .....	Lake Norden
Bakke, Adele .....	Howard
Bakke, Josie .....	Howard
Baker, Laura .....	Carpenter
Bamsey, Mae .....	Howard
Barton, Ora .....	Spencer, Ind.
Beck, Letty E. ....	Winfred
Belk, Vida M. ....	Henry
Bensten, Laurel .....	White

Bennett, L. L. ....	Brookings
Bergeim, Joseph ....	Brookings
Blecker, Samuel ....	Brookings
Bickel, Eva ....	Watertown
Bickel, Gladys ....	Watertown
Bohnhoff, Kathryn ....	Bruce
Browning, Lenore ....	Brookings
Burns, Alta ....	Watertown
Calkins, Elizabeth ....	St. Lawrence
Carlisle, Marian ....	Brookings
Catlett, Margaret ....	Brookings
Christianson, Mary ....	Jasper, Minn.
Colliton, Dollie ....	Brookings
Colliton, George ....	Brookings
Cotton, Ethel ....	Pipeston, Minn.
Conklin, Allen G. ....	Oldham
Cook, Orlan ....	Clear Lake
Crofoot, Vanita ....	Webster
Cronin, Teresa ....	Egan
Dahlen, Nora ....	Oldham
Daly, Gladys ....	Watertown
Daily, Margaret ....	Carthage
Dalthorp, Rosella ....	Volga
De Walt, Pearle ....	Brookings
Dimmette, Chas. L. ....	Brookings
Doyle, Margaret ....	Colman
Dunster, Annie ....	Colman
Dybdahl, Julian ....	Brookings
Elliott, Warren G. Jr. ....	Brookings
Erie, Frances E. ....	Brookings
Eves, Neva ....	Castlewood
Evans, Roy ....	Brookings
Fasheim, Olga ....	Howard
Francis, Ada ....	Mound City
Frandsen, Josephine ....	Brookings
Furnish, Alta ....	Bunceton, Mo.
Geyer, Mary ....	Brookings
Gotthold, Roy C. ....	Brookings
Hammer, Sarah ....	Toronto
Hanson, Hazel ....	Brookings
Handwerk, Gertrude ....	Brookings
Handwerk, Clara ....	Brookings
Hanson, Ross P. ....	Brookings
Harper, William ....	Canton
Heitland, Kate ....	Wolsey
Holliday, Jack ....	Brookings
Hubbard, Ethel ....	Arlington



Hyde, G. Hara	Brookings
Irish, Edith	Brookings
Jackson, C. F.	Salem
Jarvis, Ruth	Brookings
Jensen, Esther	Howard
Johnson, Ethel	Brookings
Jodozi, Anna	Oldham
Kaiser, Anna M.	Howard
Kast, Ada	Havana, N. D.
Kazaerzak, Mary	Erwin
Kerr, Irene	Pipestone, Minn.
Keating, enevieve	Flandreau
Kennard, George	Brookings
King, Esther	Brookings
Kirkevold, Petra	Hendricks, Minn.
Knutson, Robert	Brookings
Kotan, Theresa	Flandreau
Larson, Lars P.	Vilas
Lee, George	Watertown
Leighty, William	Brookings
Lindblom, Phebe	Canova
Loeck, John F.	Howard
Lynch, Edward	Brookings
Lynch, Ruth	Brookings
Martella, Lydia	Thomas
Mathews, Marjory	Brookings
Mathews, Zoa	Brookings
Mathieson, Homer	Watertown
Mitchell, Alice	Clear Lake
Mitchell, Donald	Brookings
Mitchell, Frances	Clear Lake
Mohr, Lucille	Watertown
Montgomery, Mae	Wolsey
Moore, Ellen	Newport, Va.
Morgan, Della	Armour
Nelson, Ineta	Dell Rapids
Nesseeth, Gladys	Volga
Neyhart, Helen	Gorman
Nord, Daisy	Brookings
Onstine, Everett	Flandreau
Orhrans, Venie	Brookings
Pearson, Blanche	Brookings
Pearson, Gladys	Brookings
Peddicord, Helen	Brookings
Peters, Dorothy	Granville, Ia.
Pierce, Ruth	Brookings
Peterson, Harriet	Brookings

Piehl, Martha	Esmond
Pickett, Hubbie	Brookings
Platt, Ida	Viborg
Plumb, Olive	Brookings
Riis, Jens	Brookings
Ridout, Lillian	Brookings
Ridout, Olive	Brookings
Rilling, Elsie	Brookings
Rogen, Thalma	Sherman
Rutherford, Jessie H.	Chicago, Ill.
Sanders, Cecilia	Brookings
Schliemann, Gertrude	Hartford
Schmidkunz, Julia	Hazel
Seagreen, Olive	Turton
Severson, Florence	Brookings
Severson, Lenora	Volga
Shaw, Happy	Madison
Sherman, Mae	Howard
Sherman, Sara	Howard
Skiff, Hazel	Brookings
Slaatta, Emma	Wilmot
Sloat, Ora	Lowry
Smith, Edna	Egan
Smith, Rosa	Egan
Snodgrass, Agnes	Miller
Snyder, Dorothy	Bruce
Spurling, Dorothy	Brookings
Steele, Edmund	Howard
Stordahl, Anna	Carthage
Strand, Tansy	Howard
Street, Emma J.	Albee
Swenson, Selma	Jasper, Minn.
Tate, May	Brookings
Voss, Edward F.	Garvin, Minn.
Watson, Edith E.	Brookings
Wardahl, Leah	Flandreau
Weber, Anna	Watertown
Wendt, Eva	Fulton
Winright, George	Alexandria
Wolber, Oscar	Brookings
Wold, Ruby	Brookings
Woodruff, Victor	Miller
Worden, Winnie	Brookings
Zickrick, Elmer	Murdo

### SHORT COURSES

#### CREAMERY—THREE MONTHS

Anderson, Chris.	Fowler, Colo.
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Blanchard, George	Brookings
Cook, Ralph	Alva, Wyoming
Gerner, William	Chausse, Mont.
Howell, Arthur S.	Florence
Hurd, Wm. James	Bruce
Johansen, Eines	Seaman, Ohio
Liesner, Will	Jackson, Wis.
Looyzen, Herphy L.	White
Moerman, Paul	Boyden, Iowa
Nachtigal, Emil J.	Academy
Neal, Floyd	Brookings
Nelson, Nels Chris.	Perth Amboy, N. J.
Nielson, Arthur W.	Lake Benton, Minn.
Olson, Herbert	Milaca, Minn.

### FARM ENGINEERING

Anderson, Anthony	Crooks
Anderson, Edwin	Hamill
Behnke, Henry W.	Britton
Bergh, Martin O.	Volga
Brown, Ernest	Lucas
Carrington, David	Mt. Vernon
Deville, Peter W., Jr.	Watertown
Erickson, Edgar	White
Gales, William N.	White Lake
Hammer, Alfred	Hammer
Hammer, Andrew	Hammer
Hansen, Fred Hans	Millard
Harriman, Forest	Mapleton, Minn.
Hank, Basil	Lake Andes
Hausman, Charles LeRoy	Springfield
Heaton, Guy H.	Gary
Johnson, Otto W.	Flandreau
Kelty, Frank S.	Plankinton
Kelty, John	Plankinton
Kinyon, John Glenn	Arnott
Kjeldseth, Ole Adeli	Irene
Krogvig, Peter	Mission Hill
Larsen, Frederick	Stickney
Lee, August	Volin
McDonald, Charles E.	Tabor
McKnight, Clyde	Brookings
Martinmaas, Werner	Orient
Meier, Leo P. N.	Woonsocket
Mikkelson, Raymond A.	Wakonda
Nelson, Victor L.	Gayville
Ness, Alvin	Bruce

Nesson, Harold	Aurora
Nolan, Thomas Patrick	Plankinton
Peterson, Clarence W.	Gayville
Quincey, Ralph P.	Sioux Falls
Rymerson, Selmer	Toronto
Sayville, George	Plankinton
Strub, Guy C.	Manchester
Tipley, Lewis	Geddes
Tribitt, Clarence H.	Altamont
Wideriksen, Hans	Stickney
Witzel, Roy	Brookings

### FARM AND HOME COURSE

DEC. 26-30, 1916.

Auth, Chris.	Brookings
Auth, Joe	Elkton
Baldrige, F. F.	Brookings
Barber, Clare	Mitchell
Bassen, P. M.	Platte
Baxter, H. E.	Hazel
Baxter, Everett	Hazel
Baxter, Oliver	Hazel
Berg, A.	Volga
Berg, J. E.	Volga
Berg, Matt	Castlewood
Blecker, H. J.	Brookings
Bolles, M. N.	Brookings
Burnett, E. M.	Sutherland, Ia.
Caldwell, Lacy	Brookings
Carr, E. W.	St. Lawrence
Carson, Geo. L.	Bradley
Chamberlain, A. E.	Aberdeen
Chase, A. B.	Brookings
Chenoweth, R. F.	Brookings
Clement, Embert	Sinai
Coon, Ralph	Bushnell
Cram, R. E.	Esmond
Crane, Dorlan	Brookings
Crane, W. M.	Brookings
Crawford, Anson L.	Brookings
Dawes, H. E.	Fulton
Dunlop, J. W.	Brookings
Englund, W. O.	Bratsburg
Evans, Edgar	Brookings
Fenn, George	Brookings
Fjerstad, C. C.	Brookings
Gellerman, Fred	Cavour

Gotthold, Roy C. ....	Miller
Gustafson, Carl J. ....	Aberdeen
Haman, Carl H. ....	Brookings
Hart, E. J. ....	Brookings
Haynes, A. L. ....	Scotland
Heathcote, F. J. ....	Summit
Helfenstien, Harry ....	Parker
Hinsvark, M. B. ....	Cottonwood
Hughes, Felan T. ....	Ft. Pierre
Jackson, Thos. J. ....	Ft. Thompson
Johnson, G. S. ....	Brookings
Johnson, Jacob ....	Lake Preston
Johnston, John, Sr. ....	Brookings
Jones, H. C. ....	St. Lawrence
Keck, J. A. ....	Brookings
Knutson, Sigurd V. ....	Carthage
Kremer, Frank ....	Brookings
Lawrence, Frank ....	Yale
Lawrence, James ....	Yale
Lawshe, Ben B. ....	Aberdeen
Leibert, Peter ....	Bushnell
Lewis, Knute ....	Lake Preston
Lindsey, Dave ....	Pierre
Lindsay, James ....	Brookings
Lynch, Edward ....	Brookings
McGrath, Peter ....	Brookings
Mair, C. B. ....	Brookings
Malone, R. S. ....	Huron
Martin, Clark ....	Brookings
Morse, Carl ....	Seneca
Newton, Chas. ....	White
Nicol, John ....	Wetonka
O'Hair, E. B. ....	Brookings
Olson, Nels ....	Hetland
Palm, A. W. ....	Watertown
Peddicord, E. S. ....	Brookings
Perley, Geo. A. ....	Flandreau
Peterson, P. C. ....	Bonilla
Peterson, P. O. ....	Brookings
Pierce, E. F. ....	Brookings
Prentice, Z. ....	Brookings
Quail, A. E. ....	Volga
Richardson, David ....	Volga
Rilling, Fred ....	Brookings
Risch, John ....	Elkton
Robbins, Albert ....	Spencer
Rude, N. G. ....	Volga



Ruttum, Julius .....	Hendricks, Minn.
Sanderson, G. R. ....	Brookings
Schuler, M. G. ....	Brookings
Schuller, D. ....	Brookings
Schwenk, A. E. ....	Brookings
Selix, Dewey ....	Brookings
Selix, Sheridan ....	Brookings
Simonson, Herbert ....	Brookings
Skillestad, Oscar ....	Oldham
Sloan, Jas. ....	Brookings
Sloan, Will ....	Brookings
Slocum, O. C. ....	Brookings
Snyder, F. J. ....	Bruce
Somers, W. J. ....	Brookings
Stark, Oscar ....	Estelline
Strub, Guy ....	Manchester
Sussex, S. W. ....	Highmore
Swartz, Earl ....	Canton
Swenson, Gust. ....	Mitchell
Thompson, Ben B. ....	Volga
Thompson, Jens ....	Odham
Thornber, Jas. ....	Brookings
Tobias, Sever ....	Bradley
Tompkins, A. T. ....	Brookings
Tompkins, A. W. ....	Brookings
Tompkins, Lawrence ....	Brookings
Ucker, Charles ....	Clear Lake
Warner, L. H. ....	DeSmet
Welch, W. H. ....	Brookings
Willey, E. B. ....	Brookings
Wright, G. A. ....	Ireton, Ia.

### WOMEN

Austin, Ethel .....	Brookings
Carr, Mrs. E. W. ....	St. Lawrence
Egeland, Mrs. W. O. ....	Bratsburg
Fenn, Mrs. Geo. ....	Brookings
Gates, Mrs. F. L. ....	Brookings
Hart, Mrs. E. J. ....	Brookings
Hart, Marguerite ....	Brookings
Haynes, Mrs. A. L. ....	Scotland
Hughes, Mrs. Felan T. ....	Ft. Pierre
Leibert, Mabel ....	Bushnell
Leibert, Mrs. Peter ....	Bushnell
Lewis, Knute (Mrs.) ....	Lake Preston
O'Hair, Mrs. E. B. ....	Brookings
Richardson, Mrs. David V. ....	Volga

Slocum, Mrs. O. C. ....	Brookings
Swenson, Hettie ....	Mitchell
Webster, Mrs. Mattie ....	Woonsocket
McCall, Mrs. L. E. ....	Brookings
Patty, Mrs. R. L. ....	Brookings
Jones, Mrs. Laura ....	Jefferson, Ia.
Rowe, Mrs. H. S. ....	Brookings
Rowe, Nellie ....	Brookings
Warner, Mrs. H. L. ....	DeSmet
Caldwell, Kate ....	Brookings
Auth, Mrs. D. ....	Brookings
Perisho, Mrs. E. C. ....	Brookings
Swenson, Miss Laura ....	Brookings
Clinesmith, Miss Abbie ....	Brookings
McGarry, Mrs. ....	Brookings
Gates, Miss ....	Brookings
Peterson, Miss Ethel ....	Brookings

**SUMMARY****1916-17.****RANK****Collegiate—**

	Men	Women	Total	Gr. Ttl.
Post Graduate Students.....	5	0	5	
Seniors .....	38	17	55	
Juniors .....	43	28	71	
Sophomores .....	72	35	107	
Freshmen .....	78	55	133	
Specials .....	3	7	10	
<b>Total Collegiate .....</b>	<b>239</b>	<b>142</b>	<b>381</b>	<b>381</b>

**Preparatory—**

Fourth Year .....	11	12	23	
Third Year .....	9	8	17	
Second Year .....	11	9	20	
First Year .....	14	7	21	
<b>Total Preparatory .....</b>	<b>45</b>	<b>36</b>	<b>81</b>	<b>81</b>

Music Students .....	44	63	107	107
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**School of Agriculture—**

Fourth Year .....	28	11	39	
Third Year .....	24	4	28	
Second Year .....	40	15	55	
First Year .....	112	31	141	
<b>Total School of Agriculture</b>	<b>204</b>	<b>61</b>	<b>265</b>	<b>265</b>

Summer Session .....	36	119	155	155
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**Short Courses—**

Creamery .....	15	0	15	
Farm Engineering .....	42	0	42	
Farm and Home .....	120	40	160	
Junior Short Course .....	68	0	68	
<b>Total Short Courses .....</b>	<b>245</b>	<b>40</b>	<b>285</b>	<b>285</b>

<b>Grand Totals .....</b>	<b>813</b>	<b>461</b>	<b>1274</b>	<b>1274</b>
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Names Repeated .....	66	84	150	150
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<b>Net Totals .....</b>	<b>747</b>	<b>377</b>	<b>1124</b>	<b>1124</b>
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# INDEX

	Page		Page
Absences .....	39	Dormitories .....	32
Adams Act .....	23, 132	Dressmaking .....	66
Admission, Conditions of...	34	Drug Assaying .....	98
Agriculture .....	41, 124	Dynamo Design .....	73
Agronomy .....	43, 59	Dynamo Electric Machinery	73
Alternating Currents .....	73	Economics .....	81
Alumni, List of .....	137	Education .....	84
Alumni Association .....	137	Electric Lighting .....	73
Anatomy .....	92	Electrical Engineering..	46, 72
Animal Breeding .....	53	Electricity and Magnetism.	72
Animal Husbandry .....	42, 53	Electrical Measurements ..	72
Animal Nutrition .....	53	Engineering Design .....	70
Architectural Drawing and		Engineering Degrees .....	39
Design .....	67	English .....	78
Art .....	111	Entomology .....	93
Assistants .....	11	Entrance Requirements ...	34
Astronomy .....	88	Equipment .....	24
Athletic .....	29	Establishment .....	21
Bacteriology .....	93	Expenses, Students' .....	30
Board and Rooms .....	31	Experiment Station ...	22, 132
Bookkeeping .....	119	Experimental Engineering..	70
Botany .....	90	Extension Division ....	22, 134
Breeds of Live Stock .....	53	Faculty .....	5, 27
Buildings .....	24	Faculty Committees .....	19
Business Law .....	120	Farm .....	25
Calendar .....	2, 3	Farm Mechanics .....	130
Carpentry .....	63	Crop Breeding .....	60
Cheesemaking .....	56	Floriculture .....	64
Chemistry .....	95	Forestry .....	64
Christian Associations .....	30	Forging .....	69
Civil Engineering .....	47, 74	Free Hand Drawing .....	122
Collegian Staff and Organ-		French .....	80
ization .....	29	Gas and Oil Engines .....	69
Commerce Department ....	117	General Science Course ...	48
Concrete Construction ...	71, 74	General Information .....	21
Conditioned Students .....	39	German .....	80
Contracts and Specifications.	77	Geology .....	62
Cooking .....	65, 123	Grades .....	38
Courses of Study .....	39	Gymnasium .....	25
Creamery Work .....	56, 129	Hatch Act .....	22, 132
Credits .....	37	Heating .....	25, 71
Dairy Husbandry .....	42, 56	Heredity .....	64
Dairy Bacteriology .....	56	History .....	81
Dairying .....	42	History of Education .....	85
Dams .....	77	Home Economics .....	44, 65
Debating .....	29	Home Nursing .....	66
Degrees .....	39	Horticulture .....	43, 63
Descriptive Geometry .....	69	Hydraulics .....	76
Dietetics .....	66	Hygiene .....	66

	Page		Page
Income, Sources of .....	22	Public Speaking .....	83
Irrigation .....	62	Publications, Student .....	29
Inspection of Dairy Products .....	59	Railroad Engineering ...	77, 78
Instructors .....	11	Regents .....	5, 27
Jack Rabbit .....	29	Registration, Method of ...	37
Journalism .....	87	Sanitation .....	66
Kinematics .....	70	Schemes of Study .....	41
Laboratories .....	26	Scholarships .....	33
Landscape Gardening .....	64	School of Agriculture .....	124
Languages, Modern .....	80	Sewing .....	66
Law, Business .....	120	Shorthand .....	119
Library .....	26	Shops .....	26
Live Stock Management ..	54	Smith Lever Act .....	23
Literary Societies .....	29	Sociology .....	82
Living Arrangements of Students .....	31	Soils .....	61
Machine Design .....	69	Spanish .....	80
Machine Shop .....	69	Special Short Courses 2, 41,	128
Master's Degree .....	41	Special Students .....	38
Masonry and Foundations..	71	Statics .....	71, 76
Materia Medica .....	98	Steam Boilers .....	70
Mathematics .....	87	Steam Engineering .....	131
Mechanical Engineering..	45, 67	Steam Engines .....	70
Mechanics of Materials ....	70	Stock Breeding .....	53
Mechanical Drawing .....	69	Stock Feeding .....	54
Meteorology .....	62	Stock Judging .....	53
Military .....	31, 38, 113	Stresses .....	76
Morrill Act .....	22	Structural Design and Engineering .....	71, 86
Music .....	101	Student Association .....	28
Nature Study .....	93	Student List .....	161
Nelson Fund .....	22	Student Publications .....	29
Oratory and Debating .....	29	Summer School .....	127
Organizations, Student ....	30	Surveying .....	76
Pharmacognosy .....	100	Terms and Vacations .....	2
Pharmacy .....	52, 98	Textiles .....	66
Physics .....	88	Traction Engineering .....	130
Physiology .....	92	Tuition .....	30
Piano Music .....	106	Typewriting .....	119
Plant Propagation .....	63	Uniforms, Military .....	31
Pomology .....	64	Vacations .....	2
Political Science .....	81	Veterinary Anatomy .....	55
Postal Facilities .....	26	Veterinary Medicine .....	54
Poultry Culture .....	54	Violin Music .....	106
Poultry Feeding and Breeding .....	54	Voice .....	106
Preparatory Department ...	121	Volumetric Analysis .....	100
Principles of Teaching ....	85	Wood Turning .....	63
Psychology .....	85	Zoology .....	92







C  
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1917/18

Vol. V

April 1918

No. IX

# South Dakota State College of Agriculture and Mechanic Arts

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BULLETIN

---

Annual Catalog, 1917-1918

With Announcements for the Year 1918-1919

---

Published Quarterly by  
THE SOUTH DAKOTA STATE COLLEGE  
Brookings, S. D.

---

Entered as second-class matter August 10, 1908, at the post-office at Brookings, S. D., under Act of July 16, 1904.



## The College Bulletin

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The South Dakota State College Bulletin is published quarterly by authority of the Regents of Education.

The Bulletin contains information in detail relative to the entrance requirements of the different courses of instruction, the schedules of study, lists of instructors of the institution and its administration, equipment, organizations, publications, funds, students' expenses, scholarships, etc.

The institution includes the following departments of instruction: Animal Husbandry, Dairy Husbandry, Agronomy, Horticulture and Forestry, Veterinary Medicine, Home Economics and Domestic Art, Mechanical Engineering, Electrical Engineering, Civil Engineering, English, Modern Languages, History and Political Science, Public Speaking, Education, Mathematics and Astronomy, Physics, Botany, Entomology and Nature Study, Zoology, Chemistry, Pharmacy, Music, Art, Military Science and Tactics, Commercial Science, the Preparatory Department, and the School of Agriculture. Short special courses of instruction are given in Agriculture, Dairying, Home Economics and Farm Engineering.

In addition to the instructional work the Agricultural Experiment Station and the Agricultural Extension Division are maintained at the College.

The College bulletins are sent free, postage paid, on request. The request should indicate the department concerning which information is desired.

For bulletins and other information address the President, State College, Brookings, South Dakota.

Vol. V

April 1918

No. IX

# South Dakota State College of Agriculture and Mechanic Arts

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• 1918 •

JANUARY.

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• 1918 •

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• 1919 •

JULY.

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DECEMBER.

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# **\* College Calendar for 1918-1919**

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## **FIRST SEMESTER**

1918

June 10-July 19—Six weeks Summer School.

September 30-October 1—Entrance examinations and registration.

October 2—Work of first semester begins at 8 a. m.

November 5—Enrollment in the School of Agriculture.

November 28-29—Thanksgiving Recess.

December 20—Christmas vacation begins at 4 p. m.

1919

January 2—Christmas vacation ends at 8 a. m.

March 20—School of Agriculture closes.

## **CALENDAR OF SHORT COURSES**

January 6-March 13—Special Creamery Course.

January 2—Course in Farm Mechanics.

December 30-January 4—Farm and Home Course.

\*Because of the irregular conditions due to the war, the calendar for the entire year will not be completed until next Fall. For further information, write to the President, State College.

## REGENTS OF EDUCATION

Hon. T. W. Dwight.....	Sioux Falls
Hon. August Frieberg.....	Beresford
Hon. Frank Anderson.....	Webster
Hon. J. W. Campbell.....	Huron
Hon. T. D. Potwin.....	Lemmon

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### Officers of the Board

Hon. T. W. Dwight.....	President
Hon. I. D. Aldrich.....	Secretary
Hon. G. H. Helgersen (State Treasurer).....	Treasurer

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### Regents' Committee for the College

Hon. T. W. Dwight

Hon. J. W. Campbell

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### Statement of the Ownership, Management, Circulation, Etc.

of South Dakota State College of Agriculture and Mechanic Arts Bulletin, published quarterly at Brookings, South Dakota, required by the Act of August 24, 1912.

Name of	Postoffice Address.
Editor, G. L. Brown, Dean of College.....	Brookings, South Dakota
Publisher, South Dakota State College of Agriculture and Mechanic Arts.....	Brookings, South Dakota
Owners, South Dakota State College of Agriculture and Mechanic Arts.....	Brookings, South Dakota
Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: None.	

ELLWOOD C. PERISHO,  
President of College.

Sworn to and subscribed before me this 6th day of April, 1918.

R. A. LARSON,

(Seal)

Notary Public.

(My commission expires June 14, 1921.)



# Instructional Division

## \*Teaching Staff

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Note: The first date after the name indicates year of appointment to present position on the staff; the second date, in case the first does not do so, indicates the year of first appointment in the College.

**ELLWOOD C. PERISHO, 1914, President of the College.**

B. S., Earlham College, 1887; A. M., 1889; LL. D., 1913; M. S., University of Chicago, 1895.

**GEORGE LINCOLN BROWN, 1914, 1897, Vice-President, Dean of the Faculty; Professor of Mathematics.**

B. S., University of Missouri, 1892; M. S., 1893; Ph. D., University of Chicago, 1900.

**R. A. LARSON, 1901, Secretary of the College.**

**VIRGINIA E. SPENCER, 1917, Adviser of Women.**

B. A. and B. D., Kansas State University, 1891; Ph. D., Zurich University, 1897.

**CLARA SHANK, 1918, Housekeeper of the Girls' Dormitory.**

B. S., Butler College, 1892; M. S., 1894.

**ROBERT ELLIOTT, 1914, Registrar.**

B. S., South Dakota State College, 1914.

---

**MADISON CLAIR BATES, 1907, Professor of English.**

A. B., Williams College, 1904; A. M., 1905; A. M., Harvard University, 1906.

**EDWARD R. BINNEWIES, 1916, 1913, Assistant Professor of Chemistry.**

B. S., South Dakota State College, 1913; M. S., 1915.

**JOHN A. BONELL, 1915, 1910, Assistant Professor of Mechanical Engineering.**

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\*With the exception of the administrative officers, the names are arranged alphabetically. The Faculty is composed of the President, Professors, Associate Professors and Assistant Professors.

**FYRON BRIGGS BRACKETT, 1909, Professor of Electrical Engineering.**

A. B., Syracuse University, 1890; A. M., 1893; Ph. D., Johns Hopkins University, 1897.

**CHARLES HARVEY BRADY, 1915, Professor of Vocational Education.**

B. S., Indiana Tri-State College, 1902; A. B., University of Indiana, 1907; A. M., Columbia University, 1912.

**FRANK EMERSON BROWN, 1914, Professor of Public Speaking.**

A. B., Knox College, 1902; A. M., 1908.

**ADA B. CALDWELL, 1899, Professor of Industrial Art.**

**MANLEY CHAMPLIN, 1914, 1911, Assistant Professor of Agronomy; Assistant Agronomist, Experiment Station; Crops Specialist, Extension Division.**

B. S., South Dakota State College, 1909; M. S., 1914.

**CARL CHRISTENSEN, 1914, 1906, Assistant Professor of Music.**

**\*ROBERTSON COOK, 1910, 1908, Professor of Mechanical Engineering.**

M. E., University of Minnesota, 1902.

**B. A. DUNBAR, 1912, 1911, Associate Professor of Chemistry.**

A. B., Ohio Wesleyan University, 1891; A. M., 1892.

**HARRY W. EWING, 1912, Professor of Physical Education.**

**ROBERT BLACKWOOD FORSEE, 1901, Principal of the Preparatory Department.**

Principal of Pedagogy, Western College (Mo.) 1888.

**MAUDE A. GODDARD, 1914, 1903, Assistant Professor of Art.**

**NIELS EBBESEN HANSEN, 1895, Professor of Horticulture and Forestry; Vice Director and Horticulturist, Experiment Station.**

B. S., Iowa Agricultural College, 1887; M. S., 1894; Sc. D., University of South Dakota, 1917.

**ALBERT SPENCER HARDING, 1901, 1897, Professor of History and Political Science.**

B. S., South Dakota State College, 1892; A. M., University of Nebraska, 1897.

**GARNETT HEDGE, 1912, Professor of Music.**

Graduate Des Moines Musical College, 1894.

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\*Absent on leave during 1917-1918.

**HOWARD H. HOY, 1915, 1899, Associate Professor of Physics and Mechanical Engineering.**

B. S., South Dakota Agricultural College, 1896; M. S., 1903.

**ALBERT NASH HUME, 1911, Professor of Agronomy; Agronomist, Experiment Station.**

B. S. A., Purdue University, 1900; M. S., 1902; Ph. D., Goettingen University, 1911.

**JOSEPH GLADDEN HUTTON, 1911, Associate Professor of Agronomy; Associate Agronomist, Experiment Station; Soils Specialist, Extension Division.**

Graduate, Indiana State Normal School, 1899; B. S., University of Chicago, 1908; M. S., University of Illinois, 1910.

**CHRISTIAN LARSEN, 1918, 1907, Professor of Dairy Husbandry, Instructional Division; Director, Extension Division; Dairy Husbandman, Experiment Station.**

B. S. A., Iowa State College, 1902; M. S. A., 1904.

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**WILLIAM LASSITER, Colonel United State Army, Retired, 1917, Professor of Military Science and Tactics and Commandant of Cadets.**

**CHARLES CLINTON LIPP, 1913, Professor of Veterinary Medicine; Consulting Veterinarian, Experiment Station; Director of the Animal Health Laboratory.**

D. V. M., Ohio State University.

**HUBERT BERTON MATHEWS, 1896, 1893, Professor of Physics.**

B. S., South Dakota Agricultural College, 1892; M. S., 1899.

**CHRISTY WILLIAM MICHEL, 1912, Professor of Botany.**

A. B., Litt. B., Ohio Wesleyan University, 1904; A. M., Harvard University, 1912.

**SHIRLEY PUTNAM MILLER, 1910, 1905, Professor of Zoology and Rural Sanitation.**

B. S., South Dakota State College, 1903; M. A., University of Minnesota, 1905.

**CLIFFORD N. MILLS, 1914, 1913, Assistant Professor of Mathematics.**

B. S., Franklin College, 1910; A. M., Indiana University, 1915.

**W. ALBERT PETERSON, 1912, Assistant Professor of Music.**

Graduate American Conservatory of Music, 1909.

**WILLIAM HOWARD POWERS, 1905, Librarian and Associate Professor of English.**

A. B., Miami University, 1891; A. M., Harvard University, 1899.

**CHARLES F. SCHLATTER, 1911, Professor of Commercial Science.**

Graduate Southern Iowa Normal, 1902; B. S., South Dakota State College, 1916.

**EARL R. SERLES, 1917, 1915, Professor of Pharmacy; Acting Head of the Department.**

Ph. G., South Dakota State College, 1911; B. S., 1915; M. S., 1917.

**HARRY C. SEVERIN, 1909, Professor of Entomology and Nature Study; Entomologist, Experiment Station; State Entomologist.**

B. A., University of Wisconsin, 1906; M. A., Ohio State University, 1908.

**\*JAMES HENRY SHEPARD, 1888, Professor of Chemistry; Chemist, Experiment Station.**

B. S., University of Michigan, 1875.

**HALVOR CHRISTIAN SOLBERG, 1896, 1891, Professor of Mechanical and Steam Engineering.**

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., 1896.

**BELLA SPENCER, 1913, Professor of Modern Languages.**

A. B., Kansas State University, 1899.

**GEORGE ARTHUR STARRING, 1911, 1910, Professor of Journalism; Agricultural Editor.**

A. B., Huron College, 1907.

**ERNEST D. STIVERS, 1913, Professor of Secondary Agricultural Education; Director of the Summer School.**

B. S., Iowa Agricultural College, 1901.

**BENJAMIN LEE THOMPSON, 1912, 1909, Associate Professor of Animal Husbandry; Associate Animal Husbandman, Experiment Station.**

B. Sc. in Ag., Ohio State University, 1908.

**MABEL WARD, 1916, Professor of Home Economics.**

B. S., Columbia University, 1910.

**ALBERT JONES WILLIS, 1913, Professor of Civil Engineering.**

C. E. Lehigh University, 1905.

**JAMES WILBUR WILSON, 1902, Professor of Animal Husbandry; Director and Animal Husbandman, Experiment Station.**

B. S. A., Iowa Agricultural College, 1896; M. S. A., 1898.

**GERTRUDE S. YOUNG, 1914, 1907, Assistant Professor of English and History.**

A. B., University of Wisconsin, 1906.

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\*Died February 21, 1918.

## Instructors and Assistants

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**FRANCES GERTRUDE BROWN, 1917**, Instructor in the School of Agriculture.

B. A., Carleton College, 1911.

**IONA BURROWS, 1916**, Instructor in Music.

B. S., Mus. Bac., Coe College, 1916.

**WILSON CRAMER, Jr., 1914**, Instructor in Poultry Culture, in charge of the Department.

**JOE M. ELDRIDGE, 1916**, Instructor in Dairy Husbandry.

B. S., Iowa State College, 1916.

**ADA B. ERWIN, 1916, 1911**, Instructor in Home Economics and Assistant Principal, School of Agriculture.

B. S., South Dakota State College, 1909.

**MATTHEW FOWLDS, 1914, 1913**, Assistant in Agronomy; Assistant in Crops, Experiment Station.

B. S., South Dakota State College, 1913.

**GEORGE GILBERTSON, 1914**, Instructor in Entomology.

B. S., South Dakota State College, 1914, M. S., 1916.

**ANTON HOGSTAD, Jr., 1917**, Instructor in Pharmacy and Botany.

P. C., Philadelphia College of Pharmacy, 1914.

**EDITH HUBBART, 1912**, Assistant Librarian.

B. S., South Dakota State College, 1908.

**NELLIE J. KENDALL, 1912**, Instructor in English, School of Agriculture.

B. S., South Dakota State College, 1908.

**E. GUSSIE KREUTTER, 1916**, Instructor in the School of Agriculture.

**LOUISE LOCKERLY LEATON, 1916**, Instructor in Home Economics, B. S., Illinois Wesleyan University, 1912.

**MAX M. MAHANY, 1916, 1915**, Instructor in Spanish, Secretary to the President.

B. A., LL. B., South Dakota State University, 1914.

**GERTRUDE McKNIGHT, 1915**, Instructor in the School of Agriculture.

**JENNIE C. PETERSON, 1917**, Instructor in the School of Agriculture, B. Di., Iowa State Teachers College, 1909.

**GEORGE C. PHILLIPS, 1914, 1912**, Student Adviser.

B. S., South Dakota State College, 1909.



**\*CHARLES S. ROWE, 1916, Instructor in Chemistry.**

B. S., South Dakota State College, 1916.

**WALDINE B. SCHNEIDER, 1916, Instructor in German.**

Ph. B., University of Chicago, 1916.

**REGINALD C. SHERWOOD, 1916, 1914, Instructor in Chemistry; Assistant Chemist, Experiment Station.**

B. S., South Dakota State College, 1914; M. S., 1916.

**CATHERINE SWIFT, 1916, Instructor in Home Economics.**

Graduate Stout Institute, 1913.

**R. L. WELCH, 1916, Assistant in Mechanical Engineering.**

**MARGARET WHITEHEAD, 1917, Instructor in Sewing, School of Agriculture.**

B. S., University of Wisconsin, 1916.

**THOMAS H. WRIGHT, JR., 1917, Instructor in Dairy Husbandry; Assistant Dairy Husbandman and Dairy Bacteriologist, Experiment Station.**

B. S. in Dairying, Iowa State College, 1914.

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\*Resigned February 1, 1918, to enter the United States Army.

### LIST OF SPECIAL LECTURERS.

Mrs. Helen Barrett Montgomery.  
Prof. Bolley, North Dakota Agricultural Society.  
Rev. Harold Lee Stevens.  
Dr. Graham, Washington, D. C.  
Dr. C. D. Jarvis, Washington, D. C.  
Dr. Abi V. Holmes, Washington, D. C.  
Mrs. Henrietta W. Calvin, Washington, D. C.  
Hon. Robert E. Dowdell, Aberdeen, S. D.  
Governor Peter Norbeck, Pierre, S. D.  
Hon. T. W. Dwight, Sioux Falls, S. D.  
Hon. A. B. Dalthorp, Volga, S. D.  
Hon. C. H. Anderson, Pierre, S. D.  
Dr. Thomas Moran, Washington, D. C.  
Miss Van Hosen, University of Chicago.

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### OTHER OFFICERS AND EMPLOYEES.

George E. Purdy, Custodian of the Buildings and Grounds.  
A. T. Larson, College Engineer.

### FACULTY COMMITTEES.

Faculty Committees will be announced at the beginning of the college year.

# General Information

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## HISTORICAL SKETCH

**Establishment.**—An act of the Territorial Legislature approved February 21, 1881, provided that "an Agricultural College for the Territory of Dakota be established at Brookings, \* \* \* provided that a tract of land of not less than eighty acres be secured and donated to the Territory of Dakota."

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was opened for use September 24, 1884.

The Enabling Act admitting the state of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the agricultural college, as provided in the acts of congress making donations of lands for such purpose. The acts of congress here referred to are, primarily, the act of July 2, 1862, known as the Morrill Act, providing that 30,000 acres of public land for each representative in congress be given to each state towards "the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

By the Enabling Act of 1889 Congress granted to South Dakota for the Agricultural College 40,000 additional acres, in lieu of a grant that had been made to new states in 1841. Thus the total land grant for the Agricultural College was 160,000 acres.

In the Morrill Act of 1862, such colleges were spoken of as "Colleges of Agriculture and Mechanic Arts." In order that the name might more nearly conform to the object for which the College was established, the legislature of 1907 changed the name from "The Agricultural College of South Dakota" to "The State College of Agriculture and Mechanic Arts."

The \*Experiment Station was organized in 1837 under the Hatch Act of Congress, which provided for the establishment of agricultural experiment stations in connection with agricultural colleges. These stations were established for the purpose of conducting experiments and research work in connection with all branches of the agricultural industries of the United States, due regard being paid to the varying conditions and needs of the respective states. It is also their object to aid in diffusing among the people useful and practical information on all subjects connected with agriculture. The South Dakota Station conducts its investigations chiefly along the following lines: Live stock, veterinary science, soils, field experiments, greenhouse work, trees and small fruits, and chemistry of plant growth and foods.

The \*Extension Division was established to carry to the people of the state the results of the work of the College. From its earliest history the College has sent out members of its staff to help the people of the state by addressing meetings, acting as judges at fairs and for agricultural clubs, and in various other ways. The College, however, had no money available to conduct such work in a systematic way until recently. In May, 1914, the Smith-Lever Act was passed by Congress providing \$10,000 annually to each state beginning with July 1, 1914, to be used for agricultural extension work by the State Colleges of Agriculture in co-operation with the United States Department of Agriculture. The act also provides that beginning with July 1, 1915, additional amounts which increase from year to year are to be given to the different states upon the condition that the states appropriate equal amounts to be used in connection with the national fund for extension work.

**Sources of Income**—A joint resolution passed by the legislature of 1890 accepted the lands granted in the enabling act. These lands were not at once assigned. The commissioner of Public Lands reported that 64,658 acres had been selected.

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\*See the index for references to additional information concerning the Agricultural Experiment Station and the Extension Division.

All have since been selected; very few have been sold. A small amount is received yearly as rental. The first income recorded was \$1,197.71, September 1, 1896. As no school lands may be sold for less than ten dollars an acre, these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will probably be sufficient for the needs of the college.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of \$25,000 per annum.

An act making appropriation for the Department of Agriculture, approved by Congress March 4, 1907, provides for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson, of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of \$5,000 for the year 1907-1908, which increased \$5,000 each year until it reached \$25,000 per annum. The College, therefore, receives \$50,000 annually from the National Government for instructional purposes.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

The Hatch Act provides that the experiment stations should receive \$15,000 annually from the National Government. This amount has been increased by the provisions of the Adams Act of 1906, so that the experiment station now receives \$30,000 a year for maintenance.

Under the Smith-Lever Act, the College receives \$10,000 annually from the National Government for extension work. Under the same act during the present biennial period the College will receive \$38,030 additional, on the condition that an equal amount is provided by the state to be used with the



national fund. The State Legislature of 1917 appropriated \$68,000 to meet this condition and for additional extension work in the State.

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## LOCATION, BUILDINGS AND EQUIPMENT

**The Location.**—The College is located upon an eminence one mile from the business center of Brookings, which has a population of about three thousand five hundred people. The city is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch making connection with the main line at this point.

Brookings is almost an ideal college town. It is lighted by electricity and has a complete water and sewer system. Its streets are lined with trees and its houses have well kept lawns abounding in ornamental shrubs and plants.

It is a city of clean morals. No saloon has been allowed within its limits for years; and the last few times when the question of allowing saloons within the city has been submitted to a vote of the people, it has been defeated by overwhelming majorities.

**The College Buildings and Grounds.**—The college campus upon and about which the college buildings are placed is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary walks and drives. Adjoining on the rear are the horticultural gardens, and to the north and northwest is the college farm.

The oldest building on the campus, called the Central Building, was erected in 1884. This and the other two old buildings, called, during recent years, the North Building and the Experiment Station Building, will in the future be given over to general class room, laboratory and extension purposes.

The Agricultural and Administration Building provides executive offices, an auditorium, laboratories, class rooms and offices for the various agricultural departments.

The Physics-Engineering Building is occupied by the physics and the engineering departments with their various class rooms, laboratories and shops.

The Plant Breeding Building, together with the large Greenhouse, furnishes room for the work that is being conducted by the departments of botany, horticulture and entomology.

The Chemistry-Pharmacy Building, a two-story structure, is occupied by the class rooms and laboratories of those departments.

The Creamery is a two-story building which was almost doubled in size in 1911 by an addition which was made to meet the growing demands upon this department.

The Gymnasium is a two-story building that is used for athletic exercises and military drill during the season when such work cannot be carried on outdoors. In connection with the Gymnasium a tract of land near the campus has been fitted up for outdoor exercises and sports.

Wenona Hall, a splendid brick dormitory for young ladies, stands on a site just across the street from the campus. It will accommodate about sixty women.

Wecota Hall, the new dormitory for young women, has recently been completed. This building cost \$75,000, and will provide rooms for about one hundred twenty ladies.

The central heating and electric light plant occupies a brick structure in the rear of the campus. The buildings are all heated by steam and lighted by electricity generated in this plant.

Near the campus on the adjoining college farm are located the agricultural and the dairy barns, together with a number of smaller buildings which are devoted to agricultural purposes.

The legislature of 1917 appropriated \$100,000 to complete the Agricultural Hall, \$80,000 for an armory, and \$20,000 for a livestock pavilion. These buildings are now being erected.

**The Farm and Horticultural Gardens.**—The college farm includes four hundred and sixty acres, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the students may witness and actually participate in this scientific work. The remainder of the farm is used as a model

stock and dairy farm under the direction of the professor of animal husbandry. Practical work in experiments involving the best farming practices for this region are given the students.

The Horticultural Gardens comprise about fifty acres adjoining the campus. Here and in the Greenhouse a large amount of work in fruit propagation and plant experimentation is being carried on.

**The Laboratories, Shops and Museums.**—Well fitted laboratories and shops have been provided in all those departments where their use is made necessary by modern educational methods. The value of illustrative materials has been recognized, and numerous departments have made large collections and museums. The equipment of the various departments is described in connection with the description of their work.

**The Library and Reading Room.**—The library, occupying rooms on the first floor of the Central Building, contains over 21,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains sets of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

**The Postal Facilities.**—The College furnishes first-class postal facilities, the mail of the students being delivered at the college at convenient times during the day, making it unnecessary for them to go to the city postoffice.

## ORGANIZATION AND GOVERNMENT

**The Board of Regents.**—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who have charge of all of the educational institutions which are maintained either wholly or in part by the state. The terms of office of the regents are each six years and expire at different times, so that the board is a continuous body. Appointments to the board are made by the Governor, with the approval of the senate, "of persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located. who shall be designated as the Regents of Education."

Among the powers and duties of the regents as defined by law some important ones are, to employ members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

**The Faculty.**—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. The president appoints, at the beginning of each college year, certain faculty committees which take up such work as may be assigned them by the president and faculty.



In the government of the College the faculty relies chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly and maintain good behavior at all times. Students are not only under the direct supervision of the faculty while on the campus, but are responsible for their conduct wherever they may be.

In order that the work of the College may be rendered as efficient as possible and all relations made harmonious, a set of regulations, chiefly governing matters of classification, has been adopted by the faculty. No set rules are expected to cover every condition that arises, and all students should recognize the importance of co-operation with the faculty in their efforts to make college life helpful to the student body as a whole.

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## STUDENT ACTIVITIES

**Faculty Control.**—While the students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical, social and other activities, the faculty retains an advisory interest in all such matters, and has the right at any time to pass reasonable regulations for the welfare of the College.

**The Student Association.**—The athletic, debating and oratorical interests, and the student publication, the *Industrial Collegian*, are under the control of the Student Association, which governs these activities by means of a board of control, consisting of students and members of the faculty. This board is organized into the Athletic, the *Collegian*, and the Debating Councils, each of which directs the respective interests that come under it. A fee of three dollars a semester, or proportional sums for students whose work is arranged in terms shorter than the semester, is charged for membership, which admits the holder to all student exercises under the supervision of the association and pays for a subscription to the *Collegian*.



**Athletics.**—Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

**Oratory and Debating.**—Each year for a number of years representatives of the college have met students from other institutions in debating contests. The members of the local teams are chosen in a series of preliminary contests in which all are encouraged to take part. There has thus been aroused among the student body a large interest in this kind of work and a healthy rivalry to obtain places on the intercollegiate teams.

Credit for three hours work during one semester is given those who take part in an intercollegiate debate.

A representative of the college is sent each year to the intercollegiate oratorical contest of the state. This student is selected by means of a local preliminary contest. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

**The Student Publications.**—The Industrial Collegian is a weekly paper published by the students of the College. It is intended to be a mirror of student life at this institution, and all phases of college activity have representatives on its staff of editors.

The Jack Rabbit is published annually by the junior class, and is a good representative and exponent of college life.

**The Literary Societies.**—The literary society is an important factor in the education of the students and all are strongly advised to take part in this kind of work. All preparatory students are expected to become members of the Franklin Society whose work is carried on under the supervision of the preparatory department, and is a preparation for the college societies.

The faculty and various citizens, recognizing the value of literary society work, have contributed several trophies to be competed for by the Athenian, Miltonian and Delphian Societies, which are composed of students of collegiate standing.

**The Christian Associations.**—In the state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student who stands for pure manhood and womanhood to affiliate himself or herself with them. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among the members of the student body. Each association is represented by a local secretary and also by state and international college secretaries.

**Other Student Organizations.**—Among these may be mentioned the Art Club which encourages interest in art by bringing exhibits to the College and in various other ways; the chorus, orchestra, and band, which give a series of musical entertainments during the year; the Agricultural Club, the Engineering Club, the Pharmacy Club and other organizations which promote interest along the various lines of college work.

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## STUDENT EXPENSES

**Tuition and Other Fees.**—The tuition for regular work extending throughout the college year is six dollars per semester, or twelve dollars per year. For information concerning tuition fees for work that is not arranged according to semesters, see the respective courses. A student who enrolls must pay the full tuition for the semester or term. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which the student takes work. Books and other supplies are furnished by the student.

As an inducement to students to register promptly, the Regents have imposed the rule that a tardy enrollment fee of twenty-five cents per day shall be collected of all students

who enroll subsequent to the regular day announced for that purpose. However, in no case shall the tardy enrollment fee exceed one dollar and fifty cents.

Special fees are charged for instruction in music in the College. (See the department of music.)

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

**Estimate of Expenses.**—On account of the rapidly changing conditions due to the war, it is not possible to make a very accurate estimate of the necessary yearly expenses of a student. At the present time (April 6, 1918), these are approximately as follows:

Board and room .....	\$250.00
Tuition .....	12.00
Fees in Student Association .....	6.00
Laboratory Fees .....	10.00
Books and Supplies .....	30.00
Laundry Expenses .....	20.00
Incidentals .....	25.00
	<hr/>
	\$353.00

Men students are expected to purchase military uniforms which cost \$28.00 to \$30.00 each.

While the above is considered as a reasonable estimate, many students go through the year on a less amount. Much depends upon the character of the student and the work he is taking.

**Board and Rooms.**—Good rooms and board can be obtained at private houses. The dormitories provide a large number of the young ladies with comfortable homes at reasonable rates. (See the following page for dormitory regulations.) Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students. A list of

approved available places for boarding or rooming can be obtained at any time from the President of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations. If prospective students will write to the Young Men's Christian Association or the Young Women's Christian Association of the College, officers of these organizations will be glad to arrange to meet them at the train and help them to secure boarding and rooming places.

**The Ladies Dormitories.**—The two dormitories, Wenona Hall and Wecota Hall, the latter of which has just been completed, will accommodate about one hundred seventy-five young women. The halls are under the immediate supervision of a preceptress who does everything possible to make a real home for those who live there. The young women are given a large share in the government of the halls, and are thus encouraged to form orderly habits and high ideals of conduct.

Precautions have been taken to reduce danger from fire to a minimum. The buildings are heated with steam, lighted by electricity. Bath rooms, toilet rooms and lavatories are on each floor. In addition, each room is provided with a large closet, and a stationary wash stand with hot and cold water.

Each room is provided with two single cots or beds with mattresses and pillows, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The cost of rooms in the halls is \$13.50 per semester for each occupant, two in a room. This fee includes both light and heat. The room rent is payable in advance. The occupants will be expected to take care of their own room.

A student desiring room reserved for her must forward \$2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded after September first.

In connection with the dormitories, a large dining hall which will accommodate about four hundred people, is con-



ducted not only for the young women who room here, but also for the benefit of other students, both young women and young men, who room elsewhere. The cost of table board will thus be reduced to a minimum. During the past year this has been \$4.00 a week. Owing to the unsettled conditions at the present time it is impossible to state what the cost of board will be during the next year. However, the dining hall will be conducted so as to provide wholesome fare at minimum cost.

Payment for board in the dining hall must be made for four weeks in advance, and no deduction will be made for less than one week's absence.

**Student Labor.**—There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the College authorities to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college.

**Scholarships.**—The following articles from the law, defining the powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution. The student must present his appointment to the secretary of the College at the time of enrollment in order to obtain credit for the same.

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## ENTRANCE REQUIREMENTS

**Admission.**—While students are admitted at any time and assigned to such classes as they are found best fitted to enter,



it is much better to commence work at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters late he will not under any condition be allowed to hold a class back. See paragraph concerning tuition for statement concerning tardy enrollment fee. If a tardy beginning is imperative the student must arrange with a tutor for assistance in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

Candidates for admission to any department of the College must be at least fourteen years of age and of good moral character.

Credit in the College may be obtained by presenting certified grades from other institutions of reputable standing or through examination. The College reserves the right, however, to cancel grades accepted from other schools should the student be found deficient in the subject for which he has received credit.

The College will furnish prospective students with application blanks, which, after being filled out with certified standings and other data, should be returned to the registrar.

The first two days of the first semester are devoted to the registration of students. All students should complete their registration at this time and new students must present their credits at or before this time if they expect to be assigned a proper classification.

**Entrance Credits.**—For admission to the four-years courses leading to the degree of Bachelor of Science, and the courses in Pharmacy leading to the degrees of Pharmacy Graduate and Pharmaceutical Chemist, the student should present credit for fifteen units of high school or other secondary school work. A unit is a subject which is taught five periods a week throughout the school year, or the equivalent of this work. Of the fifteen units required, some are prescribed, the remaining units being in optional subjects as indicated in the table below. A student who has graduated from a creditable high school course of four years will in general be enrolled as a member of the freshman class, but in case

the prescribed subjects have not been completed, he may be required to bring up this back work.

A student may be admitted to a college class without having passed in one unit of his entrance requirements. This shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects in which he is deficient with the regular classes.

A preparatory course is maintained for the benefit of students who are unable to attend a high school to complete the entrance requirements. Students will not be admitted to this department unless they present evidence that they have completed the work of the public schools as far as the ninth grade. For the preparatory course, see the Preparatory Department.

The list of prescribed and optional subjects are as follows:

### Prescribed Units

English, three units in advance of grammar. These should consist of composition work and a study of some of the simpler American and English classics.

Algebra, one and one-half units for engineering students, one unit for others. The fundamental operations, factoring, fractions, simple equations, involution, evolution, radicals, quadratic equations and the analysis and solutions of problems involving these principles.

Plane Geometry, one unit. The completion of plane geometry. Special emphasis should be paid to the solutions of original problems and constructions. Students of engineering who have not completed solid geometry in the high school will be required to take the subject in the freshman year of the college course.

Elementary Physics, one unit. One year's work covering the science as presented in the best text books. Laboratory work should accompany the text book work.

History, one and one-half units. This work should follow, and not include, elementary United States History, and should be a connected study of some of the following lines: ancient, medieval, modern, English, American history.

Civics, one-half unit. A study of the constitutions of the United States and of the state, as presented in the best high schools.

Foreign Language, two units. These credits should be for two full years' work in either German, French, Spanish or Latin. In case a student is a graduate of a four-years high school course which does not include any foreign language, he may present other entrance credits in place of these two units, but should take foreign language in the freshman and sophomore years of his college course.

### Optional Units

The three and one-half optional units may be offered in the same lines of work as the prescribed units and in other departments, as indicated by the table below. About the only requirement made concerning the work for which credit is offered is that it should be of a reasonably high standard. The maximum credit that is allowed in each subject is indicated in the table. While no minimum is stated it is expected that the student shall have covered a reasonable amount of a subject before being given any credit in it.

#### TABLE OF ENTRANCE REQUIREMENTS

	Prescribed Units	Maximum Allowed
English .....	3	3
*Algebra, thru quadratics .....	1	2
Plane Geometry .....	1	1
Elementary Physics .....	1	1
History, following elementary U. S. History .....	1½	3
*Foreign Language, German, French, Spanish or Latin .....	2	4
Civics .....	½	½
Science—		
Agriculture .....		1
Physiology, following Biology, Zoology or Botany .....		½
Botany .....		1
General Biology .....		1
Zoology .....		1

Geology .....	.....	1½
Physical Geography .....	.....	1½
Bookkeeping .....	.....	1½
Commercial Geography .....	.....	1½
Freehand Drawing .....	.....	1½
Manual Training, including Mechanical Drawing .....	.....	1
Cooking .....	.....	1½
Sewing .....	.....	1½
*Solid Geometry .....	.....	1½

\*See above for exceptions as to algebra, solid geometry and foreign language.

## STUDIES

**Credits.**—Credit for college work is counted in credit hours. A credit hour is one hour of class or lecture work requiring an additional hour and a half in preparation. Two and one-half hours in laboratory work is counted equivalent to one hour spent in the class room.

**Registration.**—In registering for work the student is advised by a member of the faculty who helps him to make out a consistent schedule of studies. In general, students are not allowed to classify in more than twenty or less than fourteen credit hours a week. The faculty recognizes that, because of differences in subjects and in the ability of students, some are able to carry a larger number of hours than others, and endeavor to assign to each student enough work to keep him reasonably busy without overloading him.

**Special Students.**—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special work if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

**Military Requirements.**—The national law organizing and endowing the state agricultural colleges requires that military science shall form part of the instruction offered. All male students below the junior year are required to take military



drill three times a week unless excused because of physical disability or for some other reason. Certificates of disability should be obtained from the physician whom the College authorities have designated for such work, the College bearing the expense of the examination.

According to the Federal law creating the Reserve Officers Training Corps, of which the College has accepted the provisions, juniors and seniors may elect military science during the remainder of their course, and thus receive commutation of clothing and board from the National Government. For further regulations governing the work see the military department.

**Grades.**—All grades of students are reported to the registrar by means of the letters, M, S, E, I, P, and F. The letter M means that the student's work is of medium or average grade. The letter S, meaning superior, indicates that the work is above the average, but is not as high as E, which means that the student's work is excellent or so high above the average as to merit special mention. The letter I means inferior or below the average, but is higher than P, meaning passed, which indicates that the student has only a sufficient knowledge to make it unprofitable for him to repeat the subject. The letter F means that the student has failed to receive a passing grade. In the case of a failure in a subject which is continued during the semester following the student may, at the discretion of the instructor, be allowed to continue the subject. In such a case the grade should be marked Fc (continued), which will be changed to P in case the student attains a grade of M in the following semester's work in the subject.

**Conditioned Students.**—Any student who without good reason has failed to receive a passing grade in a reasonable amount of his work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges, or he may be dropped from the college.



**Absences.**—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexcused absences as the faculty may deem proper. Should a student find it necessary to be late to his class he should make an explanation to his instructor at the close of the period.

Extra credits will be required of students for absences from college duties, whether the absences are excused or not, unless the students are absent officially representing the College. While the faculty will do all that is reasonably possible to assist students to bring up work which has been missed because of sickness or for other good reasons, they recognize the principle that even a good excuse should not stand in lieu of scholarship.

## DEGREES AND CERTIFICATES

**Degrees.**—The courses of study leading to degrees given by the College are as follows:

The two-years course in Pharmacy, leading to the degree of Pharmacy Graduate. For additional work of two years leading to the degree of Bachelor of Science, see schedule of Pharmacy Course.

The three-years course in Pharmacy, leading to the degree of Pharmaceutical Chemist. This course will be offered for the first time during the year 1918-1919. Upon the completion of an additional year's work outlined under faculty direction, the student may receive the degree of Bachelor of Science.

The four-years course in Agriculture, in which the student may specialize along the lines of animal husbandry, dairy husbandry, agronomy, horticulture, plant pathology or teacher training. The teacher training course in Agriculture will be offered for the first time during the year 1918-1919. For further details concerning this work, see description of the

department of Education. Upon the completion of one of these schemes, under the direction of the head of the department in which the group of electives is chosen, the student will receive the degree of Bachelor of Science.

The general course and the teachers training course in Home Economics, each of four years, leading to the degree of Bachelor of Science. The teachers training course in Home Economics will be offered for the first time during the year 1918-1919. For details concerning this course, see the description of the department of Education.

The four-years course in Mechanical, Electrical and Civil Engineering, leading to the degree of Bachelor of Science. In order to meet the constantly increasing demand for better equipped and more thoroughly trained men along the several lines of engineering activities, an additional fifth year's course of study is offered in each of the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, Electrical Engineer or Civil Engineer, will be conferred. This work, which is nearly all prescribed, is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The four-years course in General Science, leading to the degree of Bachelor of Science. The work of this course is largely elective and is planned to give the student a liberal education, at the same time permitting specialization in the sciences.

The degree of Master of Science is offered to students who have received the Bachelor's degree either from this institution or from other institutions of equal rank, and who in addition have completed at least one full year's resident work, i. e., thirty-six credit hours, in advanced study and have shown a reasonable proficiency in such work. At least two-thirds of this work must be in some one line of study, called the major work. The scheme of study presented by the student for the degree must be prescribed by the faculty committee on advanced degrees, who will outline the work in consultation with the head of the department in which the major work is taken.

It should be understood that the work for this degree can not be subjected to rigid regulation, and that each case must be dealt with on its individual merits.

Owing to the great demand for county agricultural agents and extension workers the College will give instruction along these lines to a limited number of graduates in Agriculture. Such persons should show some special fitness for the work they wish to take up. The instruction will consist of lectures on extension history, methods of conducting extension work, legislation, and other topics; the assisting of county agents and the carrying out of projects. The work will be varied according to the line that the student wishes to pursue. This work will be carried on in connection with the agricultural departments of the College and may be applied towards completing the requirements for the degree of Master of Science.

**Special Courses.**—The College also offers special courses in several important and practical lines of work. These are mentioned in other parts of the catalog under the proper headings, and are as follows:

The four-years course in the school of agriculture.

The four-years preparatory course.

The one-year secretarial course.

The five-months course in farm mechanics.

The three-months creamery course.

Courses in vocal and instrumental music.

Special work in art.

The farm and home course, for farmers and farmers' wives.

**Schemes of Study.**—The courses leading to the degree of Bachelor of Science and the degrees in Pharmacy are outlined on the following pages. The conditions for entrance to these courses may be found under "Entrance Requirements." A department will not be required to give an elective unless at least five students are enrolled in the subject.

**GENERAL COURSE IN AGRICULTURE**

	Credits	
	1st Sem.	2nd Sem.
<b>Freshman Year</b>		
Rhetoric, English 9 and 10 .....	3	3
Elementary Chemistry, Chemistry 1 and 2 .....	4	4
Grain and Root Crops, Agronomy 1 .....	4	
Farm Dairying, Dairy Husbandry 1 .....		3
Stock Judging, Animal Husbandry 1 .....	3	
Breeds of Live Stock, Animal Husbandry 2 .....		3
*Modern Language, French 1 & 2, or Spanish 1 & 2	4	4
Military Tactics .....	1	1
	<hr/>	<hr/>
	19	18
<b>Sophomore Year</b>		
General Botany and Plant Pathology, Botany 2 & 3	4	4
Organic Chemistry, Chemistry 11 .....	4	
Quantitative Chemistry, Chemistry 3 .....		3
General Horticulture, Horticulture 1 & 2 .....	1	1
Modern Language, French 3 & 4 or Spanish 3 & 4	4	4
or		
Practical Physics, Physics 10 & 11		
or		
Industrial History of U. S., History 17 & 18		
or		
Analytic Geometry & Calculus, Mathematics 11 & 12		
Veterinary Anatomy, Veterinary 1 .....	2	
Psychology, Education 1 .....		3
Agricultural Entomology, Entomology 3 & 4 .....	2	3
Military Tactics .....	1	1
	<hr/>	<hr/>
	18	19
<b>ANIMAL HUSBANDRY GROUP</b>		
<b>Junior Year</b>		
Principles of Animal Breeding, Animal Husbandry 4		3
Stock Feeding, Animal Husbandry 6 .....		3
Animal Nutrition, Animal Husbandry 5 .....	3	
Extempore Speaking, Public Speaking 3 .....		2
Soils, Agronomy 8 & 9 .....	4	4
General Zoology and Physiology, Zoology 3 & 4 ...	4	4
English Literature, English 17 .....	3	
General Bacteriology, Zoology 10 .....	3	
Elective .....	2	3
	<hr/>	<hr/>
	19	19

\*Instead of Modern Languages the student may take Carpentry and Plane Trigonometry during the first semester, and Forging or Business Law with Plane Surveying during the second semester.

Credits  
1st Sem.    2nd Sem.

### Senior Year

Advanced Stock Judging, Animal Husbandry 3 ...	2	
Economics, History 13 .....	3	
Rural Economics, History 16 .....		3
Veterinary Medicine, Veterinary 3 .....		3
Agricultural Chemistry, Chemistry 6 .....		3
Veterinary Hygiene and Sanitation, Veterinary 2...	2	
Live Stock Production and Management, Animal Husbandry 7 .....		4
Elective .....	11	4
	<hr/> 18	<hr/> 17

### DAIRY HUSBANDRY GROUP

#### Junior Year

General Zoology and Physiology, Zoology 3 & 4 ...	4	4
Soils, Agronomy 8 & 9 .....	4	4
Inspection and Testing of Dairy Products, Dairy Husbandry 2 .....	4	
General Bacteriology, Zoology 10 .....	3	
Dairy Bacteriology, Dairy Husbandry 3 .....		4
Dairy Technology, Dairy Husbandry 7 .....		4
Extempore Speaking, Public Speaking 3a .....		2
English Literature, English 17 .....	3	
	<hr/> 18	<hr/> 18

#### Senior Year

Principles of Animal Breeding, Animal Husbandry 4		3
Factory Operation, Dairy Husbandry 4 & 5 .....	4	4
Dairy Management, Dairy Husbandry 6 .....	3	
Economics, History 13 .....	3	
Rural Economics, History 16 .....		3
Elective .....	8	8
	<hr/> 18	<hr/> 18

### AGRONOMY GROUP

#### Junior Year

Soils, Agronomy 8 and 9 .....	4	4
General Zoology and Physiology, Zoology 3 & 4....	4	4
General Bacteriology, Zoology 10 .....	3	
English Literature, English 17 .....	3	



	Credits	
	1st Sem.	2nd Sem.
Extempore Speaking, Public Speaking 3a .....		2
Crop Breeding, Agronomy 2 .....		3
Field Management, Agronomy 3 .....		2
Elective .....	4	3
	<hr/>	<hr/>
	18	18

**Senior Year**

Economics, History 13 .....	3	
Rural Economics, History 16 .....		3
Heredity, Botany 10 .....		3
Geology, Agronomy 13 .....	5	
Forage Crops, Agronomy 4 .....		3
Elective .....	10	
	<hr/>	<hr/>
	18	18

**HORTICULTURE AND PLANT PATHOLOGY GROUP****Junior Year**

General Zoology and Physiology, Zoology 3 & 4 ...	4	4
Soils, Agronomy 8 & 9 .....	4	4
Extempore Speaking, Public Speaking 3a .....		2
General Bacteriology, Zoology 10 .....	3	
Plant Pathology, Botany 5 .....	4	
Plant Materials, Horticulture 8 .....		1
Heredity, Botany 10 or Horticulture 7 .....		3
Systematic Pomology, Horticulture 5 .....	2	
Plant Physiology, Botany 4 .....		4
Elective .....	2	
	<hr/>	<hr/>
	19	18

**Senior Year**

Economics, History 13 .....	3	
Forestry, Horticulture 4 .....	2	
Economic Entomology, Entomology 5 & 6 .....	3	3
Agricultural Journalism, Agricultural Journalism 2 .....	2	
Architectural Drawing, Mechanical Engineering 6..	3	
Nursery Management, Horticulture 9 & 10 .....	4	4
Landscape Gardening, Horticulture 6 .....		4
Rural Economics, History 16 .....		3
Sociology, History 14 .....		3
Experimental Horticulture, Horticulture 11 .....		2
Elective .....	2	
	<hr/>	<hr/>
	19	19

**TEACHER TRAINING COURSE IN AGRICULTURE****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Grain & Root Crops, Agronomy 1 .....	4	
Farm Dairying, Dairy Husbandry 1 .....		3
Stock Judging, Animal Husbandry 1 .....	3	
Breeds of Live Stock, Animal Husbandry 2 .....		3
Carpentry & Forging, Mechanical Engineering 1 & 2	2	2
Plane Trigonometry, Mathematics 9 .....	2	
Plane Surveying, Civil Engineering 1 .....		2
or		
Modern Language, French 1 & 2, Spanish 1 & 2		
Military Tactics .....	1	1
	<hr/>	<hr/>
	19	18

**Sophomore Year**

General Botany & Plant Pathology, Botany 2 & 3..	4	4
Organic Chemistry, Chemistry 11 .....	4	
Quantitative Chemistry, Chemistry 3 .....		3
General Horticulture, Horticulture 1 & 2 .....	1	1
Agricultural Entomology, Entomology 3 & 4 .....	2	3
Modern Language, French 3 & 4 or Spanish 3 & 4	4	4
or		
Practical Physics, Physics 10 & 11		
or		
Industrial History of U. S., History 17 and 18		
or		
Analytic Geometry & Calculus, Mathematics 11 & 12		
Veterinary Anatomy, Veterinary 1 .....	2	
Educational Psychology, Education 1 .....		3
Military Tactics .....	1	1
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	18	19

**Junior Year**

English Literature, English 17 .....	3	
General Zoology & Physiology, Zoology 3 & 4 .....	4	4
Soils, Agronomy 8 & 9 .....	4	4
General Bacteriology, Zoology 10 .....	3	
Principles of Vocational Teaching, Education 2....	3	
Vocational Agricultural Education, Education 3 ...		3
Animal Nutrition, Animal Husbandry 6 .....	3	
Stock Feeding, Animal Husbandry 7 .....		3

Extempore Speaking, Public Speaking 3 .....	2	
Elective .....	3	
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	20	19

**Senior Year**

Geology, Agronomy 13 .....	5	
Heredity, Botany 10 .....		3
Principles of Animal Breeding, Animal Husbandry 4 .....		3
Economics, History 13 .....	3	
Rural Economics, History 16 .....		3
Sociology, History 14 .....		3
Special Methods of Teaching Agriculture, Educ. 4 .....	3	
Educational Administration, Education 6 .....		3
*Practice Teaching, Education 7 .....	4	
Elective .....	3	3
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	18	18

\*This work may be done either semester.

Senior Electives in Teacher Training Course in Agriculture should be chosen from the following:

**FIRST SEMESTER.**

Adv. Stock Judging .....	2 hours
Common Diseases .....	2 hours
Project Work .....	5 hours
Educ. Measurement .....	3 hours
Educational History .....	3 hours
Rural Education .....	3 hours

**SECOND SEMESTER.**

Crop Breeding .....	3 hours
Field Management .....	2 hours
Live Stock Production .....	4 hours
Prin. Animal Breeding .....	3 hours
Vet. Medicine .....	3 hours
Educ. Sociology .....	3 hours

**GENERAL COURSE IN HOME ECONOMICS****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
Drawing, Art 14 and 15 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
*Modern Language, French 1 & 2 or Spanish 1 & 2 .....	4	4
Household Physics, Physics 9 .....	3	
Plain Sewing, Home Economics 10 .....	3	
Textiles, Home Economics 11 .....		2
Food Preparation, Home Economics 4 .....		4
Hygiene, Home Economics 3 .....	1	
	<hr/>	<hr/>
	20	19

**Sophomore Year**

English Literature, English 11 and 12 .....	3	3
Organic Chemistry, Chemistry 11 .....	4	
Chemistry of Foods, Chemistry 4 .....		4
Educational Psychology, Education 1 .....		3

Modern Language, French 3 & 4 or Spanish 3 and 4

or

Industrial History of U. S., History 17 & 18

or

Practical Physics, Physics 9 & 10

or

Analytic Geometry & Calculus, Mathematics 11 & 12	4	4
Dressmaking, Home Economics 12 .....		3
Food Preparation and Serving, Home Economics 5	3	
General Botany, Botany 1 .....	4	
Household Decoration .....		2
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	18	19

#### Junior Year

English Literature, English 13 & 14 .....	2	2
General Bacteriology, Zoology 10 .....	3	
General Zoology and Physiology, Zoology 3 & 4...	4	4
Advanced Dressmaking, Home Economics 13 .....	3	
Dietetics, Home Economics 6 .....		4
Applied Design, Art 4 and 5 .....	2	2
Educational Hygiene, Zoology 12 .....		2
Extempore Speaking, Public Speaking 3 .....	2	2
†Modern History, History 7 & 8 .....	3	3
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	19	19

#### Senior Year

Economics, History 13 .....	3	
Art History, Art 6 & 7 .....	2	2
Special Problems in Cookery, Home Economics 7...	4	
Sociology, History 14 .....		3
Institutional Management, Home Economics 16 ...		3
Household Management, Home Economics 9 .....	4	
Elective .....	5	10
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	18	18

\*In place of Modern Language of the freshman year the student may elect Trigonometry and Algebra or Trigonometry and Home Dairying the first semester, and Home Gardening and Trigonometry or Business Law and Trigonometry the second semester.

†Optional in case the student has taken History in place of Modern Language in the Sophomore year.

### TEACHER TRAINING COURSE IN HOME ECONOMICS

#### Freshman Year

Rhetoric, English 9 & 10 .....	3	3
Drawing, Art 14 & 15 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4

*Modern Language, French 1 & 2 or Spanish 1 & 2	4	4
Household Physics, Physics 9 .....	3	
Plain Sewing, Home Economics 10 .....	3	
Textiles, Home Economics 11 .....		2
Food Preparation, Home Economics 4 .....		4
Hygiene, Home Economics 3 .....	1	
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	20	19

**Sophomore Year**

English Literature, English 11 .....	3	
Organic Chemistry, Chemistry 11 .....	4	
Chemistry of Foods, Chemistry 4 .....		4
Educational Psychology, Education 1 .....		3
Modern Language, French 3 & 4 or Spanish 3 and 4 or		
Industrial History of U. S., History 17 & 18 or		
Practical Physics, Physics 9 & 10 or		
Analytic Geometry & Calculus, Mathematics 10 & 11	4	4
Dressmaking, Home Economics 12 .....		3
Food Preparation & Serving, Home Economics 5 ..	3	
General Botany, Botany 2 .....	4	
Household Decoration .....		2
Extempore Speaking, Public Speaking 3 .....		2
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	18	18

**Junior Year**

English Literature, English 13 & 14 .....	2	2
General Bacteriology, Zoology 10 .....	3	
General Zoology & Physiology, Zoology 3 & 4 ....	4	4
Advanced Dressmaking, Home Economics 13 .....	3	
Dietetics, Home Economics 6 .....		4
Applied Design, Art 4 & 5 .....	2	2
Educational Hygiene, Zoology 12 .....		2
History of Education, Education 5 .....	2	
Domestic Architecture .....		2
Principles of Vocational Teaching, Education 2 ...	3	
Vocational Secondary Education, Education 10 ...		3
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	19	19

**Senior Year**

Economics, History 13 .....	3	
Art History, Art 6 & 7 .....	2	2
Special Problems in Cookery, Home Economics 7..	4	



Sociology, History 14 .....		3
Institutional Management, Home Economics 16 ...		3
†Household Management, Home Economics 9 ....	4	
Special Methods Teaching Home Economics, Educ. 4		3
‡Practice Teaching, Education 7 .....	4	
§Elective .....	2	8
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	19	19

\*In place of Modern Language of the freshman year the student may elect Trigonometry and Algebra or Trigonometry and Home Dairying the first semester and Home Gardening and Trigonometry or Business Law and Trigonometry the second semester.

†This includes work in practice cottage, two credits.

‡Practice teaching may be taken any time during the senior year.

§Electives: Millinery, Applied Design (Advanced), Manual Training, Extension Work, School Administration, School Hygiene, Vocational Educational Sociology.

### MECHANICAL ENGINEERING

#### Freshman Year

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 5 & 6 ....	2	2
Mechanical Drawing, Mechanical Engineering 5...	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2
Plane Surveying, Civil Engineering 1 .....		2
Elementary Mechanics, Mathematics 16 .....		2
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	19	18

#### Sophomore Year

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	5	5
English Literature, English 17 & 18 .....	3	3
Machine Shop, Mechanical Engineering 4 .....	3	
Calculus, Mathematics 12 .....		5
Descriptive Geometry, Mechanical Engineering 7..	2	
Machine Design, Mechanical Engineering 8 .....		3
General Astronomy, Mathematics 15 .....		3
Military Tactics .....	1	1
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	19	20

#### Junior Year

Machine Design, Mechanical Engineering 9 .....	2
Elements of Mechanism, Mechanical Engineering 10	3

Electricity & Magnetism, Electrical Engineering 1.	4	
Hydraulics, Civil Engineering 5 .....	3	
Calculus & Analytic Mechanics, Mathematics 13		
& 14 .....	5	3
Graphic Statics, Civil Engineering 3 .....	2	
Steam Engines & Thermodynamics, Mechanical		
Engineering 12 .....		5
Mechanics of Materials, Mechanical Engineering 15		4
Electrical Measurements, Electrical Engineering 2.		1
Alternating Currents, Electrical Engineering 3....		5
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	19	18

**Senior Year**

Masonry & Foundations, Mechanical Engineering 25	2	
Experimental Engineering, Mechanical Engineering		
16 & 17 .....	3	4
Steam Boilers, Mechanical Engineering 13 .....	2	
Engineering Design, Mechanical Engineering 19 ..	4	
Highway Construction or Irrigation, Civil Engineer-		
ing 4 or 11 .....	2	
Economics, History 13 .....	3	
Structural Design, Mechanical Engineering 21 ....		4
Contracts & Specifications, Civil Engineering 13...		2
Reinforced Concrete, Civil Engineering 14 .....		3
Gas & Oil Engines, Mechanical Engineering 11 ...		2
Elective .....	2	2
	—	—
	18	17

**ELECTRICAL ENGINEERING****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Mechanics, Mathematics 16 .....		2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 5 & 6 .....	2	2
Mechanical Drawing, Mechanical Engineering 5...	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2
Plane Surveying, Civil Engineering 1 .....		2
	—	—
	19	18

**Sophomore Year**

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	5	5
English Literature, English 17 & 18 .....	3	3
Machine Shop, Mechanical Engineering 4 .....	3	
Calculus, Mathematics 12 .....		5
General Astronomy, Mathematics 15 .....		3
Descriptive Geometry, Mechanical Engineering 7..	2	
Machine Design, Mechanical Engineering 8 .....		3
Military Tactics .....	1	1
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	19	20

**Junior Year**

Electricity and Magnetism, Electrical Engineering 1	4	
Machine Design, Mechanical Engineering 9 .....	2	
Elements of Mechanism, Mechanical Engineering 10	3	
Hydraulics, Civil Engineering 5 .....	3	
Calculus & Analytic Mechanics, Mathematics 13		
& 14 .....	5	3
Graphic Statics, Civil Engineering 3 .....	2	
Electrical Measurements, Electrical Engineering 2.		1
Steam Engines & Thermodynamics, Mechanical		
Engineering 12 .....		5
Mechanics of Materials, Mechanical Engineering 15		4
Dynamo Electric Machinery, Elec. Engineering 4..		5
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	19	18

**Senior Year**

Alternating Currents, Electrical Engineering 5....	5	
Dynamo Design, Electrical Engineering 6 .....	3	
Masonry & Foundations, Mechanical Engineering 25	2	
Steam Boilers, Mechanical Engineering 13 .....	2	
Experimental Engineering, Mechanical Engineering		
16 & 17 .....	3	4
Economics, History 13 .....	3	
Electric Light & Power Distribution, Electrical En-		
gineering 7 .....		5
Reinforced Concrete, Civil Engineering 14 .....		3
Contracts & Specifications, Civil Engineering 13...		2
Gas & Oil Engines, Mechanical Engineering 11....		2
Elective .....		2
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	18	18

Note—Students expecting to teach should see Education Department.

**CIVIL ENGINEERING****Freshman Year**

Rhetoric, English 9 & 10 .....	3	3
College Algebra, Mathematics 8 .....	3	
Trigonometry, Mathematics 9 & 10 .....	2	2
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Extempore Speaking, Public Speaking 5 & 6 .....	2	2
Mechanical Drawing, Mechanical Engineering 5...	3	
Military Tactics .....	1	1
Forging, Mechanical Engineering 2 .....	1	
Machine Shop, Mechanical Engineering 3 .....		2
Plane Surveying, Civil Engineering 1 .....		2
Elementary Mechanics, Mathematics 16 .....		2
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	19	18

**Sophomore Year**

Analytic Geometry, Mathematics 11 .....	5	
General Physics, Physics 3 & 4 .....	5	5
English Literature, English 17 & 18 .....	3	3
Plane & Topographical Surveying, Civil Engineer- ing 2 .....	4	
Military Tactics .....	1	1
Descriptive Geometry, Mechanical Engineering 7..	2	
Calculus, Mathematics 12 .....		5
Machine Design, Mechanical Engineering 8 .....		3
General Astronomy, Mathematics 15 .....		3
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	20	20

**Junior Year**

Calculus and Analytic Mechanics, Mathematics 13 & 14 .....	5	3
Electricity and Magnetism, Electrical Engineering 1	4	
Elements of Mechanism, Mechanical Engineering 10	3	
Hydraulics, Civil Engineering 5 .....	3	
Graphic Statics, Civil Engineering 3 .....	2	
Highway Construction or Irrigation, Civil Engineer- ing 4 or 11 .....	2	
Steam Engines & Thermodynamics, Mechanical En- gineering 12 .....		5
Mechanics of Materials, Mechanical Engineering 15		4
Stresses, Civil Engineering 6 .....		4
Railroad Surveying or Sanitary Engineering, Civil Engineering 7 or 15 .....		3
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	19	19

## Senior Year

Economics, History 13 .....	3	
Geology, Agronomy 13		
or		
Bacteriology, Zoology 10 .....	5 or 4	
Structural Details, Civil Engineering 8 .....	2	
Structure Steel Design, Civil Engineering 9 .....	3	
Masonry & Foundations, Mechanical Engineering 25	2	
Experimental Engineering, Mechanical Engineering		
16 & 17 .....	3	4
Irrigation or Highway Construction, Civil Engineer-		
ing 11 or 4 .....	2	
Contracts and Specifications, Civil Engineering 13.		2
Bridges and Dams, Civil Engineering 12 .....		4
Reinforced Concrete, Civil Engineering 14 .....		3
Railroad Surveying or Sanitary Engineering, Civil		
Engineering 7 or 15 .....		3
Elective .....		2
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	20	18

## GENERAL SCIENCE COURSE

## Freshman Year

Rhetoric, English 9 & 10 .....	3	3
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Trigonometry, Mathematics 9 .....	2	
Trigonometry, Mathematics 10		
or		
Surveying, Civil Engineering 1 .....		2
Modern Language, French 1 & 2 or Spanish 1 & 2..	4	4
Military Tactics .....	1	1
Elective from the following: .....	5	5
College Algebra, Mathematics 8		
Money and Banking, Commerce 10		
General Accounting, Commerce 11		
Carpentry, Mechanical Engineering 1		
Forging, Mechanical Engineering 2		
Drawing, Art 14 & 15		
Mechanical Drawing, Mechanical Engineering 5		
Business Law, Commerce 9		
Textiles, Home Economics 11		
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	19	19

Note: Young ladies may take Food Preparation (Home Economics 4) and Plain Sewing (Home Economics 10) in place of Trigonometry 9 & 10.



	Credits	
	1st Sem.	2nd Sem.
<b>Sophomore Year</b>		
Modern History, History 7 & 8 .....	3	3
English Literature, English 11 & 12 .....	3	3
Modern Language, French 3 & 4 or Spanish 3 & 4..	4	4
Elective: Two of the following sciences: .....	8	8
General Botany, Botany 2 & 3		
General Zoology and Physiology, Zoology 3 & 4		
General Physics, Physics 3 & 4		
Organic Chemistry, Chemistry 11		
Volumetric Analysis, Pharmacy 9		
Chemistry of Foods, Chemistry 4		
Organic Chemistry, Chemistry 9 & 10		
Quantitative Analysis, Chemistry 3		
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	18	18
<b>Junior Year</b>		
General Astronomy, Mathematics 15 .....		3
American Government, History 11 .....	3	
Psychology, Education 1 .....		3
Extempore Speaking, Public Speaking 3 .....	2	
Political Parties, History 12 .....		3
*Elective .....	13	9
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	18	18
<b>Senior Year</b>		
Economics, History 13 .....	3	
Geology, Agronomy 13 .....	5	
Sociology, History 14 .....		3
*Elective .....	10	15
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	18	18

\*Twelve hours of the elective work of the junior and senior years must be chosen from Group 1; the remaining electives may be chosen from either Group 1 or 2.

### ELECTIVES OF JUNIOR AND SENIOR YEARS IN GENERAL SCIENCE COURSE

<b>Group One</b>		
General Botany, Botany 2 & 3 .....	4	4
Economic Botany, Botany 12 .....	3	
Plant Pathology, Botany 5 .....	4	
Heredity, Botany 10 .....		3
Classification, Botany 7 .....	4	
Plant Histology, Botany 8 & 9 .....	4	4

Quantitative Chemistry, Chemistry 3 .....		3
Household Chemistry, Chemistry 8 .....	4	
Agricultural and Sanitary Analysis, Chemistry 5...	4	
Chemistry of Foods, Chemistry 4 .....		4
Industrial Chemistry, Chemistry 7 .....	3	
Agricultural Chemistry, Chemistry 6 .....		3
Organic Chemistry, Chemistry 10 & 11 .....	5	5
Volumetric Analysis and Drug Assaying, Pharmacy 9 .....		4
General Physics, Physics 3 & 4 .....	5	5
Practical Physics, Physics 10 & 11 .....	4	4
Advanced Physics, Physics 5 & 6 .....	4	4
Heat, Physics 7 .....	4	
Light, Physics 8 .....		4
Agricultural Entomology, Entomology 3 & 4 .....	2	3
Economic Entomology, Entomology 5 & 6 .....	3	3
Systematic Entomology, Entomology 7 & 8 .....	2	2
Household Pests, Entomology 9 .....		3
Medical and Veterinary Entomology, Entomology 10	2	
Nature Study, Entomology 12 .....	3	
Bird Study, Entomology 11 .....		2
Animal Behavior, Entomology 13 .....	2	
Beekeeping, Entomology 14 .....	3	
General Zoology, Zoology 3 & 4 .....	4	4
Histology, Zoology 7 & 8 .....	4	4
Bacteriology, Zoology 10 .....	3	
Applied Bacteriology, Zoology 11 .....	4	4
Embryology, Zoology 9 .....		3
Analytic Geometry, Mathematics 11 .....	5	
Calculus, Mathematics 12 .....		5
Calculus and Analytic Mechanics, Mathematics 13.	5	
Analytic Mechanics, Mathematics 14 .....		3
Plane and Spherical Trigonometry, Mathematics 9		
& 10 .....	2	2
Meteorology, Agronomy 11 .....		3

#### Group Two

French, French 5 & 6 .....	3	3
English Literature, English 13 & 14 .....	3	3
English Literature, English 15 & 16 .....	3	3
The English Novel, English 19 & 20 .....	3	3
Rural Sociology, History 17 .....	2	
American History, History 9 & 10 .....	3	3
Rural Economics, History 16 .....	2	
Industrial History of U. S., History 17 & 18 .....	4	4
Theory of Design, Art 3 .....		1
Applied Design, Art 4 & 5 .....	2	2

Art History, Art 6 & 7 .....	2	2
Theory & Interpretation of Musical Forms, Music 6.	2	
History of Music, Music 7 .....	3	
Harmony .....	3	3
Business Law, Commerce 9 .....	3	
Money & Banking, Commerce 10 .....		3
Economic Geography, Commerce 13 .....	3	3
General Accounting, Commerce 11 .....	3	
Business Principles, Commerce 12 .....		2
Literary Interpretation, Public Speaking 1 & 2 ...	3	3
Extempore Speaking, Public Speaking 3 & 4 or 5 & 6 .....	2	2
Argumentation and Debate, Public Speaking 7 ....	3	
Public Address, Public Speaking 9 & 10 .....	2	2
Elementary Public Speaking, Public Speaking 11 & 12 .....	4	4
The Speech for Special Occasions, Public Speaking 8		3
Carpentry and Wood Turning, Mechanical Engineer- ing 1a & 1b .....	3	3
Forging, Mechanical Engineering 2 .....	2	
Mechanical Drawing, Mechanical Engineering 5 ...	3	
Vocational Educational History, Education 5 ....	2	
School Administration, Education 6 .....	3	
Principles of Vocational Teaching, Education 2 ...	3	
Educational Sociology, Education 8 .....		3
Elements of Agricultural Journalism, Agricultural Journalism 1 .....	2	
Agricultural Advertising, Agricultural Journalism 2		2
Journalism for Women, Agricultural Journalism 3.		1

## THREE-YEARS COURSE IN PHARMACY

## First Year

Rhetoric, English 9 & 10 .....	3	3
Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Pharmaceutical Botany, Pharmacy 10 .....	4	
Pharmaceutical Latin, Pharmacy 1 .....	3	
Physiology, Zoology 5 .....	4	
Pharmacognosy, Pharmacy 11 .....		4
Accounting, Commerce 11 .....		2
Business Law, Commerce 9 .....		3
Military Tactics .....	1	1
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## Second Year

Modern History, History 7 & 8 .....	3	3
Organic Chemistry, Chemistry 11 .....	5	

Bacteriology, Zoology 6 .....	4	
Inorganic Materia Medica, Pharmacy 12 .....	2	
Volumetric Analysis, Pharmacy 9 .....		4
Theoretical Pharmacy, Pharmacy 13 .....		3
Practical Pharmacy, Pharmacy 5 .....		4
Military Tactics .....	1	1
*Elective .....	4	4
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	19	19

### Third Year

Organic Materia Medica, Pharmacy 2 & 3 .....	5	5
Theory and Practice of Pharmacy, Pharmacy 4 & 7	5	5
Drug Assaying and Urine Analysis, Pharmacy 15		
& 16 .....	4	4
Dispensing, Pharmacy 14 .....		4
*Elective .....	4	
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	18	18

\*The student in the three-years course may elect to the extent of 12 hours in the allied sciences, viz: Chemistry, Veterinary Medicine, Bacteriology and Zoology, or in History.

Note—With an additional year's work, approved by the faculty, the student may complete the requirements for the degree of Bachelor of Science. \*

## TWO-YEARS COURSE IN PHARMACY

### First Year

Elementary Chemistry, Chemistry 1 & 2 .....	4	4
Pharmaceutical Botany, Pharmacy 10 .....	4	
Pharmaceutical Latin, Pharmacy 1 .....	3	
Physiology, Zoology 5 .....	4	
Pharmaceutical Arithmetic, Pharmacy 6 .....	2	
Pharmacognosy, Pharmacy 11 .....		4
Theoretical Pharmacy, Pharmacy 13 .....		3
Accounting, Commerce 11 .....		2
Practical Pharmacy, Pharmacy 5 .....		4
Military Tactics .....	1	1
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	18	18

### Second Year

Organic Materia Medica, Pharmacy 2 & 3 .....	5	5
Theory and Practice of Pharmacy, Pharmacy 4 & 7	5	5
Organic Chemistry, Chemistry 11 .....	5	
Bacteriology, Zoology 6 .....	4	
Volumetric Analysis, Pharmacy 9 .....		4
Dispensing, Pharmacy 14 .....		4
Military Tactics .....	1	1
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	20	19

Note—With an additional year's work, approved by the faculty, the student may complete the requirements for the degree of Bachelor of Science.

# Department of Instruction

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## ANIMAL HUSBANDRY

**Professor Wilson; Associate Professor Thompson**

It is generally admitted that livestock farming is the basis for an intensive agriculture and that it, as well as good farming, must be practiced if the fertility of the soil is to be maintained.

Work in this department gives the student a practical and scientific knowledge of animal husbandry as applied to South Dakota conditions. The College herds and flocks include representatives of eighteen of the leading breeds of domestic animals. These are all used for class and demonstration purposes. Men having completed this course are well equipped to manage livestock farms and to judge stock shows and to teach.

The following subjects are offered by this department:

1. **Stock Judging.**—Three credits; first semester. Study and practice in judging of horses, cattle, sheep and swine. Special attention is given to the use of score cards both for market and breeding animals.

2. **Breeds of Live Stock.**—Three credits; second semester. A study of the various breeds, their origin, development, characteristics and adaptability as to use and locality; work accomplished by the noted breeders of the past and present day review.

Text: Plumb's Types and Breeds of Farm Animals.

3. **Advanced Stock Judging.**—Two credits; first semester; prerequisite, Animal Husbandry 1 and 2.

Particular attention is given to the placing of animals and the giving of reasons why they are so placed. This course includes the judging of market, breeding and show animals.

4. **Principles of Animal Breeding.**—Three credits; second semester; prerequisite, Animal Husbandry 2. This course deals with the laws that govern reproduction and the development of animals, and the different systems employed in producing both market and breeding animals; study of blood lines and pedigrees.

Text: Davenport's Principles of Breeding.

5. **Animal Nutrition.**—Three credits; first semester; prerequisite, Animal Husbandry 1 and 2, and Chemistry 2. This subject deals



with the physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations.

6. **Stock Feeding.**—Three credits; second semester; prerequisite, Animal Husbandry 5. A study of the feeding of the various classes of live stock, compounding of balanced rations, results of experimental and practical feeding investigations.

Text: Henry's Feeds and Feeding.

7. **Live Stock Production and Management.**—Four credits; second semester; prerequisites, Animal Husbandry 1, 2 and 6. This course will consist of lectures pertaining to the proper locations for live stock farms, the kind and arrangement of buildings, founding and management of herds and flocks, capital required, methods of selling, etc.

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## POULTRY HUSBANDRY

Mr. Cramer

In addition to the courses scheduled in this department, additional subjects will be offered, as demanded by the war emergency. The work offered to the School of Agriculture students is not indicated here.

1. **Poultry Culture.**—Two credits; first semester. A general course dealing with housing, yarding, marketing and the care of breeding and growing poultry.

2. **Poultry Feeding.**—One credit; first semester. This course should be preceded or accompanied by Poultry Culture. A course dealing with the feeding of breeding flocks; laying flocks; fattening for market and home use, and a general discussion of feeds as adapted to poultry.

3. **Poultry Breeding.**—Two credits; second semester. This course should be preceded or accompanied by Poultry Culture. A study of the mating systems used in producing show and utility birds; the mechanism, operation and management of incubators and brooders.

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## VETERINARY MEDICINE

Dr. Lipp

The prevention of animal disease by the adoption of better animal hygiene, sanitation and care is receiving more attention today than ever before. The reason for this is due to a fuller knowledge of the best methods of applying these measures to the prevention of disease, and to the rapidly increasing desire on the part of stock raisers and others for

preventive measures. Even with the most modern methods of treatment, it is truer today than ever before, that preventing animal disease is more desirable and less expensive than treating it. The rapidly increasing value of live stock together with the danger of introducing and spreading disease by the more complex systems of live stock raising and transportation, have increased the rapidity with which diseases spread over wide areas. Thru the necessity for protecting his own interests, the farmer of today is paying more attention to these matters. Indeed the agricultural college that does not give courses that enable its students to act intelligently and in co-operation with the local and state authorities for the prevention and control of animal diseases, fails to fulfill its duty to the state and nation.

All the courses offered by the Veterinary Department have been planned to give students the training that will assist them in the prevention of diseases common in this state. No attempt is made to teach students to diagnose or treat any of the more serious diseases, but rather to recognize their seriousness early and secure the services of trained veterinarians. Treatment suggested is only for those diseases that yield to the action of simple remedies. Every effort is made to have students realize the value of competent veterinary service. They are urged to secure it early and thereby increase the chances for early and complete recovery.

1. **Veterinary Anatomy.**—Two credits; second semester. This course gives students a knowledge of the structure of the front limb of the horse, and the care needed to maintain it in a healthy condition, and fit for the highest service. The lectures consist of a brief study of the anatomy of the front limb, and a more detailed study of the structure of the horse's foot. Especial emphasis is placed on the prevention of diseases of the foot.

2. **Veterinary Hygiene and Sanitation.**—Two credits; first semester. This course includes a study of the animal's needs of ventilation, and the best systems of ventilation. Stable lighting, the barn yard, feed lot, and in fact all parts of the barn and its surroundings are considered in their relation to animal health and the prevention of disease.

3. **Veterinary Medicine.**—Three credits; second semester. This course deals with the cause, spread, and control of the common infectious and contagious diseases of farm animals. No attempt is made to develop proficiency in diagnosis, but rather to understand the meth-

ods by which these diseases spread, and to teach the student to co-operate intelligently with local and state authorities for their control and eradication.

4. **Common Diseases.**—Two credits; first semester. This course includes a study of many of the commoner diseases, their causes and prevention. Simple treatment and methods of handling are studied in connection with those diseases that can be easily diagnosed, and that yield readily to proper care.

5. **Veterinary Physiology.**—Three credits; second semester. This course includes a study of the processes of digestion and assimilation in horses and cattle. Food is traced from the mouth thru the various digestive processes to the tissues of the body. The use of food within the tissues and the production of waste are then studied, and finally the excretions and their composition.

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## DAIRY HUSBANDRY

**Professor Larsen; Mr. Wright; Mr. Hungerford; Mr. Eldridge**

This department offers two separate courses: (1) The four-years agriculture course, the last one and one-half years of which are devoted chiefly to special dairy studies. (2) The three-months dairy course.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men to become successful operators of creameries, cheese factories, central plants and dairy farms.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery in which butter, cheese and ice cream are manufactured throughout the year. The department occupies a two-story brick building. On the first floor are the engine room, creamery rooms with full equipment for butter, cheese and ice cream making, refrigerating rooms, locker and reading room, and a large laboratory used

for instructional purposes. On the second floor are located class rooms, offices, dairy bacteriology laboratory and chemistry research laboratory.

The dairy herd, which consists of representatives of the principal dairy breeds, affords an excellent opportunity to become acquainted with dairy types. The dairy barn is large and well equipped. Milking machines are in daily use, thus affording students opportunity to acquire practical knowledge regarding machine milking.

Experiments relating to feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments, note manner of outlining and executing investigational work, and profit from results. Advanced worthy students may arrange to assist in some of this work.

The following work is offered:

1. **Farm Dairying.**—Three credits; second semester. A study of the economic production, relation of form of dairy cow to production, secretion and composition of milk; of the comparative economy in disposing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germs and degree of purity of dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. **Inspection and Testing of Dairy Products.**—Four credits; first semester.

Those taking this course should have at least one term's work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

3. **Dairy Bacteriology.**—Four credits; second semester.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, cheese, and ice cream. General bacteriology is a prerequisite study.

4. **Factory Operation (Creamery).**—Four credits; first semester; prerequisite, Dairy 2.

A thorough study is made in receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization



and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

**5. Factory Operation (Cheese).—**Four credits; second semester.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheeses, including the principles involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.

**6. Dairy Management.—**Three credits; first semester. The various methods of improving and upbuilding a dairy herd, and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptibility of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody a study of the extent to which dairy farming is practiced and under what conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

**7. Dairy Technology.—**Four credits; second semester; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

**8. Dairy Research.—**Second semester. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries.

**9. Dairy Practice.—**The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

**10. Domestic Dairying.—**Two credits; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adulteration of milk and dairy products,



modification of milk, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making and judging of cheese and butter will be demonstrated in the college creamery laboratory.

11. **Advanced Inspection of Dairy Products.**—Four credits; first semester; prerequisite, Dairy 2, Chemistry 3.

This course takes up a study of the properties of the component parts of milk and its products including abnormal milk, condensed and powdered milks, butter from neutralized cream, oleomargarine and leading types of cheese.

12. **Advanced Dairy Bacteriology.**—Four credits; first semester; prerequisite, General Bacteriology and Dairy 3; elective. This course is a continuation of Dairy Bacteriology (Course 3.) It includes a study of isolation of the bacteria of special importance in the dairy industry, such as: thorough acquaintance of characteristics of the bacteria that produce undesirable fermentations, bitter milk, slimy milk, gargety milk, gassy cheese and condensed milk, rancid butter, etc.—and pathogenic organisms especially important in connection with market milk supply. It also includes the study of the desirable bacteria, such as: lactic acid producing organisms, those that produce desirable flavors in dairy products and the pure cultures widely used in connection with fermented milk drinks.

13. **Dairy Extension.**—Four credits; first semester, prerequisite, Dairy, 1, 2, and 6; elective. This study emphasizes chiefly the subjects applied in different methods employed in the co-operative improvement of dairy cattle, co-operative building of silos, formation of cow testing associations and methods of keeping the various records, the making of official records with cows belonging to the various breeds, and the formation of co-operative creameries and co-operative marketing of dairy cattle and dairy products.

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## AGRONOMY

**Professor Hume; Associate Professor Hutton; Assistant Professor Champlin; Mr. Loomis; Mr. Fowlds;  
Mr. Winright.**

The Agronomy Department is the department of soils and crops. To help students apply the principles of science to crop production on the farms of South Dakota is the essential purpose of the courses offered.

What is soil in South Dakota, or on some farm within the state? The student may learn to outline soil areas, to analyze soils, to observe field experiments, and answer the question for himself.

What crops will grow on South Dakota soil areas, and how may the growing of them be made most profitable to the man who does the work? A study of the results of experiments will answer the questions for the student. It is attempted to give the student in agronomy that accurate knowledge of conditions which is necessary to success in farming.

The courses offered are fundamental, practical, scientific. They are designed for South Dakota farmers. They may be pursued with profit by prospective teachers of agriculture, or experiment station workers.

1. **Grain and Root Crops.**—Four credits; first semester. Production and marketing of the common field crops including barley, corn, flax, oats, potatoes, rye and wheat, etc. Classification, judging, and grading of seed. Open to all college students. Required of all agronomy students.

2. **Crop Breeding.**—Three credits; second semester. A discussion of the principles of cropping with emphasis laid upon improvement by selection, and breeding. Dealing chiefly with principal field crops of South Dakota—corn, wheat, oats, barley, potatoes, alfalfa. In addition to text book references, current articles will be reviewed from such magazines as *The Journal of American Society of Agronomy*, *Science*, *The Journal of Heredity*. Students of this course may be requested to subscribe for at least one such magazine. Required of all agronomy students.

3. **Field Management.**—Two credits; second semester; prerequisite, Agronomy 1. Arrangement and management of crop rotations with special reference to cost and profit under South Dakota conditions. Required of all agronomy students.

4. **Forage Crops.**—Three credits; second semester. Production and marketing of field crops including meadow and pasture grasses, millets, prosos, sorghums, hemp, clovers, field peas, field beans, soy beans, etc. Open to all college students.

5. **Seed Inspection.**—Two credits; second semester. Seed testing, seed impurities and method of eradication of weeds from farm crops and seeds, studies of the characteristic of crop impurities from the standpoint of eradication, such as quack grass, Canadian thistle and wild oats.

6. **Field Crops.**—Elective. Four to eight credits; prerequisite, Agronomy 2. Special problems for advanced students. The advanced student may become interested in some particular line of investigation, as crops for forage, a problem in corn breeding, the effect of storing of seed of corn or other crops upon germination and growth, the effect of various methods of cultivation, and problems of crop improvement. Such work may imply a study of previous experiments,

cropping experiments in green house or on the field. The student may be required to submit a final report or thesis. Time and number of hours to be arranged with instructor in charge.

**7. Crop Inspection.**—Two credits; second semester. Advanced grain judging, examination of the several varieties of cereals, root and forage crops, with especial reference to resistance to adverse weather conditions and diseases, examination of crops in the field, experiment plots and prepared specimens.

**8. Soil Physics and Management.**—Four credits; first semester; prerequisites, Physics 1 and 2, Chemistry 1, 2, and 3. This course deals with the origin and development of the soil under different climatic conditions; classification of soils upon several bases; texture, porosity, specific gravity, plasticity, capillarity, granulation of soils; the soil as a reservoir for water; the movement and control of soil water; irrigation and drainage; the alkali problem; aeration of the soil; its relation to soil texture and plant growth; soil temperature; the physical effect of manures upon the soil; soil erosion by wind and running water—blowing and washing—and their control; the practical application of the foregoing to methods of tillage; crop rotations and the application of green and farm manures in the management of different types of soil. The laboratory work includes a careful study of the physical properties of the soil through observation and practice; soils are also studied under field and green house conditions.

**9. Soil Fertility.**—Four credits; second semester; prerequisite, Agronomy 1 and 8, and Chemistry 11. The relation of the fertility content of the soil to crop yields; effect of supplying various elements of fertility; effects of different rotations and system of farming in relation to permanent agriculture; a study of a system of agriculture in relation to permanent agriculture; a study of a system of agriculture adapted to South Dakota conditions. The laboratory work includes the analysis of manures and fertilizers and the determination of their agricultural and commercial values; the analysis of various farm products; the analysis of a soil, preferably from the student's home farm, to determine the fertility content. These analyses serve as the basis for devising a system of permanent agriculture for the student's home farm.

**10. Advanced Soil Physics.**—Four credits; first semester; prerequisite, Agronomy 9. This course is designed for those students who wish to continue the work in Soil Physics begun in Agronomy 8. A study in the field of the effects of discing, harrowing, rolling, subsoiling, frequency and depth of cultivation with reference to conservation of soil moisture. The student may select a soil in which he is interested and make a complete physical analysis thereof; he may make a careful study of the movement of the water therein and its effect upon the growth of plants; he may choose a special irrigation or drainage problem in which he is interested; the results of the work are

summarized in a final report or thesis. Students who elect this course are advised to signify their intention of so doing at the end of the college year, so that materials may be collected during the summer, and observations reported.

**11. Advanced Soil Fertility.**—Four credits; second semester; prerequisite, Agronomy 9. This course is a continuation of Agronomy 9 and permits the student to study in detail a special soil in which he may be interested or to pursue a special problem. The work may include pot culture work in the green house; analysis of the soil used in the pots; application of various fertility elements and their relation to the management of the soil; the study of the micro-organisms of the soil in relation to the preparation and availability of plant food, preparation of culture media, cultures from soil suspensions, preparation and study of a few pure cultures, ammonification, nitrification, nitrogen fixation, legume bacteria and conditions favorable to their growth, inoculation; results of bacterial action determined by quantitative analysis; reading of bulletins, books, etc., and the preparation of a bibliography. The results of the study will be submitted in a final report or thesis.

**12. Irrigation and Drainage.**—Two credits; second semester. A consideration of the effects of the change in water contents of soils through irrigation and drainage; the effect upon the physical condition of the soil and upon its productivity, special attention given to the problems of irrigation and drainage of unreclaimed lands in South Dakota. Lectures, reading, field observations.

**13. Earth Science; Geology.**—Five credits; first semester. A course in general geology with the greater emphasis placed upon the physical division of the subject. The geology of South Dakota in relation to soils, water supplies and mineral wealth is given special attention. Collections of rocks, minerals, typical fossils, physiographic and geologic models, lantern slides, charts and maps are available for laboratory work and reference.

**14. Earth Science; Meteorology.**—Three to five credits; second semester. A practical course dealing with the laws controlling the movements of the atmosphere, the study of climatological and weather factors, with special attention to conditions in the United States, the climate and weather of South Dakota in relation to her various economic interests, weather maps and forecasts.

**15. Feed Crops.**—A course of lectures on crop production from the standpoint of feeding, offered to the short course students in dairying at the request of the Dairy Husbandry Department.

**Graduate Courses.**—A limited number of courses of study may be arranged for students who have already received the Bachelor's Degree and who desire to pursue some line of investigational work. Such students should consult with the professor in charge. Problems relating to systems of farming and soil fertility, mechanical composi-



tion of soils, drainage water, variation in type as related to crop yields, influence of selection and breeding upon yield of special crops may be included in a list of possible studies for graduates.

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## HORTICULTURE AND FORESTRY

Professor Hansen

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainments in the various sciences underlying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are offered by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for the general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

Special stress is placed upon practical work in the grafting room.

The following work is offered:



1, 2. **General Horticulture.**—One credit each semester. An introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

3. **Floriculture and Market Gardening.**—Two credits; second semester.

The commercial and amateur cultivation of flowers and vegetables under glass and in open air; lectures, demonstrations and text book work.

4. **Forestry.**—Two credits; first semester. Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees. Lectures and demonstrations.

Texts: Pinchot's Primer of Forestry; Cheyney's The Farm Woodlot; Green's Forestry in Minnesota; Proceedings of the American Forestry Congress.

5. **Systematic Pomology.**—Two credits; first semester. Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits.

Texts: American Horticultural Manual, Bailey's Principles of Fruit Culture, many bulletins and reports.

6. **Landscape Gardening.**—Four credits; second semester. The philosophy of the beautiful in its various modes of expression; gardening as one of the fine arts; historic developments of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds. Lectures; many text books and references.

7. **Heredity.**—Three credits; second semester. This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to society; recent theories and work in plant-breeding.

Texts: Darwin's Animals and Plants under Domestication; De Vries' Species and Varieties, their Origin by Mutation; Bailey's Plant

Breeding and Survival of the Unlike; Reports of International Conferences on Genetics; Reports of the U. S. Department of Agriculture.

8. **Plant Materials.**—One credit; second semester. A field and laboratory study of the trees, plants, shrubs and flowers used in Landscape Gardening.

9-10. **Nursery and Greenhouse Management.**—Four credits each semester. A field and laboratory study of nursery and greenhouse operations throughout the school year. Carefully written reports are prepared. This is supplemented by the required practical work outside of the school year.

11. **Experimental Horticulture.**—Two credits; second semester; prerequisite, courses 1-8. A survey of the some of the chief problems. An effort is made to develop the spirit of initiative and originality in research work.

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## HOME ECONOMICS

**Professor Ward; Miss Leaton; Miss Swift; Miss Erwin; Miss Whitehead**

The purpose of this department is to provide training along the lines of intelligent house-keeping, and home-making. The location of the work is the entire third floor of the North Building. The rooms consist of a large cooking laboratory, a dining room, a sewing room, and a recitation room provided with the equipment necessary for carrying on the work. Through the general library, opportunity is given for the use of the newest and best literature relating to the subject.

The work offered is intended to impart knowledge, develop skill in execution, stimulate self-direction and broaden and strengthen the individual. A good foundation of pure science is laid for all applied science in the cooking and sanitation courses, while the household arts give opportunity for artistic expression, the principles of which are gained through the regular art training.

For those who wish to teach Home Economics training is also given through carefully supervised practice teaching and the special methods course in addition to required work in the department of education.

The general subjects of the department are as follows:

For Home Economics 1 and 2, see the preparatory department.

3. **Hygiene.**—One credit; first semester. This course includes a general study of hygiene of the person, clothing and surroundings with consideration of social and ethical questions.

4. **Food Preparation.**—Three credits; second semester. The text book work covers the study of food source and manufacture. In laboratory work special emphasis is placed upon the principles and technique of cooking. The aim of the course is to develop skill in cooking, and an independence of recipes through an understanding of basic principles.

Text and reference work required.

5. **Food Preparation.**—Three credits; first semester; prerequisite, Home Economics 4. The work covers a study of food composition and value. In laboratory work special emphasis is placed upon the cost and serving of food. Practice is given in serving meals, buffet and cafeteria luncheons.

Text and reference work required.

6. **Dietetics.**—Four credits; second semester; prerequisites, Home Economics 4 and 5, Organic Chemistry and Physiology. The course consists of a study of the fundamental principles of human nutrition and the application of these principles under varying conditions and laboratory work in the planning, preparation and serving of dietaries for normal individuals of various ages, and under varying economic and social conditions.

7. **Special Problems in Cookery.**—Three credits; first semester; prerequisite, the first three years of the Home Economics course or equivalent. This course is planned to offer opportunity for advanced and original work in cooking, and the study of foods. Special problems are studied by individuals or in group, and results reported.

Reference work required.

8. **Home Nursing and Sanitation.**—Three credits; second semester; prerequisites, Home Economics 3, 4 and 5. The work includes a study of the general care of the sick; directions for emergencies, consideration of home, and community problems in sanitation.

Text and reference work required.

9. **Household Management.**—Four credits; first semester; prerequisites, Physics 9, Home Economics 4 and 5. The work includes a study of the planning and general care of the house and furnishings; cost, and use of labor saving devices; purchase, and care of food; marketing conditions; pure food laws; budgets and household accounts.

Reference and laboratory work required.

10. **Plain Sewing.**—Five credits; first semester. The work consists of a study of the stitches and their application on small articles; the use of commercial patterns; the use and application of the sewing machine in the making of plain undergarments, and a simple waist.

11. **Textiles.**—Two credits; second semester. The work includes a study of the principal textile fibres; the selection of clothing and the making of clothing budgets.

Text and reference work required.

12. **Dressmaking.**—Three credits; second semester; prerequisites, Home Economics 11 and 12. The work includes the cutting and fitting of a light weight woolen dress; remodeling of a dress and making a fancy waist or a substitute.

13. **Advanced Dressmaking.**—Three credits; first semester; prerequisites, Home Economics 11, 12, 13. The course consists of practice in designing costumes; the use of the dress form, and construction of an evening gown. Supplementary work to be added.

15. **Millinery.**—Two credits; second semester. Elective, open only to seniors.

16. **Institutional Management.**—Three credits; second semester.

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## MECHANICAL ENGINEERING

**Professor Solberg; \*Professor Cook; Assistant Professor Bonell; Mr. Welch.**

\*Absent on leave during the year 1917-18.

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the classroom is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity of tools. They are furnished with twenty-five sets of carpenter tools and eight wood turning and one pattern maker's



lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50-horse power steam engine.

The Experimental Engineering Laboratory is equipped with a 100,000 pound vertical screw testing machine, for making tensile and compressive tests of the various materials of construction; an automatic shot cement briquette-testing machine; a gas engine; a 10 by 10 steam engine; an 8 by 10 steam engine; a 5 by 7 steam engine; and there are also available for this work a 12 by 14 steam engine and two 48 by 16 horizontal tubular boilers. A calorimeter for determining the heat values of gases; a calorimeter for making British thermal unit tests of coal, and an apparatus for flue gas analysis are also used in this work.

The laboratory also possesses a large amount of small apparatus such as indicators, planimeters, steam gauges, thermometers, etc., and a complete outfit for making tests of sand, cement and concrete.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered:

1a. **Carpentry and Wood Turning.**—Three credits; first semester. Demonstration and work in the care and use of wood working tools. Talks on design of furniture, cabinets and frames. Practice at the bench in the working of a variety of woods and finishes. Work in framing or building construction. The study of manual training outlines.

1b. **Carpentry and Wood Turning.**—Three credits; second semester; continuation of Course 1a.



2. **Forging.**—Two credits; first semester. Demonstration and work in the care and use of the fire and forging tools together with the work in iron, mild steel and tool steel. The class work will include work in bending, drawing out, upsetting, shaping and tempering of tools and art smithing. The course will offer a good outline in metal work for manual training.

3. **Machine Shop.**—Two credits; second semester. Includes a study of the materials used in machine work; shop sketching; methods of laying out work; exercises in pipe fitting, chipping; filing, scraping, belt lacing, shaft aligning, babbiting, riveting, soldering, hand and ratchet drilling; and the elementary principles of machine work.

4. **Machine Shop.**—Three credits; first semester. A study of the principles and methods of machine work; problems involving the use of the various machine tools, as the lathe, planer, shaper, milling machine drill grinders, drill press, etc. Regular text book and class work supplements the actual work in the shop during both semesters of machine shop. Prerequisite, Machine Shop 3.

5. **Mechanical Drawing.**—Three credits; first semester. Instrumental, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. **Architectural Drawing.**—Two credits; first or second semester. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. **Architectural Design.**—Two credits; first semester. Principles of planning introduced in practical problems, exercises in composition and details.

6b. **Perspective.**—Three credits; first or second semester.

7. **Descriptive Geometry.**—Two credits; first semester; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. **Machine Design.**—Three credits; second semester. Solution of various problems involving the design of simple parts of the machine.

9. **Machine Design.**—Two credits; first semester. Continuation of Mechanical Engineering 8.

10. **Elements of Mechanism.**—Three credits; first semester. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. **Gas Engines and Gas Producers.**—Two credits; second semester; prerequisite, Thermodynamics. Study of the theory, design and operation of gas, gasoline and oil engines and of the various types of gas producers.

12. **Steam Engines and Thermodynamics.**—Five credits; second semester; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. **Steam Boilers.**—Two credits; first semester; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes, plates, riveting, bracing, grate and heating surface, gauges and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

14. **Kinematics.**—Two credits; second semester. Geometry of machinery, problems in the design of motion transmitting appliances.

15. **Mechanics of Materials.**—Four credits; second semester; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of the materials of construction and the behavior of and characteristics displayed by these materials when put under stress. Text: Merriam's Mechanics of Materials.

16. **Experimental Engineering.**—Three credits; first semester; prerequisite, Mechanics of Materials. Testing of materials of construction including investigation of problems in connection with use of concrete.

17. **Experimental Engineering.**—Four credits; second semester. Includes testing of gauges, thermometers, planimeters; determination of heat value of coal; use of steam and gas engine indicators, throttling and separating calorimeters, dynamometers and Prony brakes; and complete efficiency tests of engines and boilers under actual running conditions. It is the endeavor in this work to make the student familiar with the construction and operation of steam engines, steam boilers, gas engines and the many attachments and auxiliaries necessary for their efficient operation.

18. **Experimental Engineering.**—Three credits; second semester. Includes the problems and investigations embraced in Experimental Engineering 18 which are of particular importance to the Civil Engineer.

19. **Engineering Design.**—Four credits; first semester. Solution in the drawing room of some practical problems in design and making working drawings of same.

20. **Engineering Design.**—Four credits; second semester. Continuation of Mechanical Engineering 21.

21. **Structural Design.**—Two credits; first semester. Design of roofs and buildings for power stations. For students in mechanical and electrical engineering.

22. **Structural Engineering.**—Two credits; second semester. Continuation of Mechanical Engineering 23, with special reference to results obtained from Mechanical Engineering 19.

24. **Heating and Ventilation.**—Two credits; second semester. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

25. **Masonry and Foundations.**—Two credits; first semester. A study of cement, concrete and building stone with special reference to their use in walls and foundations; bearing power of soils; design and construction of foundations of various kinds.

26. **Special Problems in Experimental Engineering.**—Two credits; second semester; open to senior engineering students upon approval of head of their department.

27. **Concrete Construction.**—Two credits; first and second semesters; elective; open to junior or senior students in general science and agricultural courses. Will include practical problems in the use of concrete and the testing of concrete materials.

28-29. **Thesis Work.**—Two or three credits each semester. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

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## ELECTRICAL ENGINEERING

Professor Brackett

The purpose of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is

provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both direct and alternating current types, transformers and measuring instruments of different types and classes for recording and measuring currents, pressures and speeds. A sixty-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered:

1. **Electricity and Magnetism.**—Four credits; first semester; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the principles of the electric and magnetic circuits, electromagnetic induction, self-induction and capacity, also direct current dynamos and motors and their uses under ordinary service conditions.

2. **Electrical Measurements.**—One credit; second semester; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Alternating Currents.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurements of inductance and capacity, wave form of pressure and current, tests of machines and transformers.

4. **Dynamo Electric Machinery.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1.



Principles underlying the design, construction and operation of direct current generators and motors. Experimental study of the behavior of different types of motors and generators, efficiency tests and adjustments of machines for different conditions of service.

**5. Alternating Currents and Alternating Current Machines.**—Five credits; first semester; prerequisites, Mathematics 11, Physics 4, and Electrical Engineering 1, 2 and 4. A course similar to Electrical Engineering 3, but taking up the general theory of alternating currents more thoroughly and treating the whole subject more completely. This course is intended for electrical engineering students only.

**6. Dynamo Design.**—Three credits; first semester; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1, 2, 4 and 5 co-ordinately with this subject. In this course the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

**7. Electric Light and Power Distribution.**—Five credits; second semester; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1, 4 and 5. A study of the costs of producing electric power, distribution and wiring, selection of lamps and light distribution, interior and street illumination, electrolysis and batteries, regulating and measuring apparatus, and as many other related subjects as the time will permit.

**8. Electric Traction.**—Five credits; first semester. Various features of electric car and train operation will be studied. Among these will be types of cars, motors and controlling apparatus, the operating characteristics of various types of equipment, power stations for this kind of service, transmission lines, substations, and distributing systems. A considerable portion of the time assigned for laboratory work in the subject will be given to the inspection of traction systems in actual operation upon which accurate and detailed reports will be required.

**9. General Principles of Electrical Engineering.**—Three credits. The course will consist of a mathematical treatment of the fundamental principles of electricity and magnetism, and the application of these principles to circuits, systems and machines in regular commercial use. In some ways the course will be a review of all the electrical work of the two preceding years, but for the most part the methods used will be quite different and much more comprehensive. The object of the course is to give the student a better perspective of the whole subject of applied electricity and to develop more direct methods for solving problems in this field.

**10. Electrical Design.**—Three credits; first semester; prerequisite, all the work required for the Bachelor's degree in this depart-



ment. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

**11. Power Stations.**—Five credits; second semester; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangements of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

**12. Long Distance Transmission.**—Two credits; second semester; prerequisite, Electrical Engineering 1 to 7, inclusive. Study of long distance line construction, protective apparatus, switchboards, cut-outs, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

**13-14. Thesis.**—Two or three credits each semester. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first), and reports concerning the progress of the work submitted from time to time, to the professor in charge.

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## CIVIL ENGINEERING

### Professor Willis

The course in Civil Engineering is designed to give to the young men of the state a broad education in general and scientific subjects; to give them a thorough training in the principles underlying engineering in general, and as much special training as time will permit in those subjects belonging particularly to the field of the civil engineer. The following are some of the many lines of work open to the graduates in this course: Surveying and Mapping, Highway Construction, Railroad and Railway Construction, Bridge Designing, Structural Steel and Concrete Building Designing; Irrigation and Drainage, the design, construction and operation of Water Supply and Sewage Disposal Systems, and engineering work for city, county, state or national government.

The greater part of the time of the freshman and sophomore years is devoted to the fundamental studies which give

both general culture and preparation for the technical work of the following years. The study of and practice in Physics, Mathematics, Chemistry, English and Public Speaking is carried on; and the work in Mechanical Drawing, Machine Shop and Machine Design is given. The theory of Plane and Topographical Surveying accompanied by field work and map drawing is begun in the freshman year and continued in the sophomore year.

Practically all of the time of the junior and senior years is devoted to purely engineering subjects, a large portion of which is given by the Civil Engineering Department. These subjects might be considered as falling naturally into three groups or divisions of civil engineering, namely: (1) Municipal Engineering, including the subjects of Surveying, Highway Construction, Hydraulics, Sanitary Engineering and Irrigation; (2) Railroad Engineering; (3) Structural Engineering and Building Construction, including the subjects of Graphic Statics, Stresses, Structural Details, Structural Design, Bridges, Dams and Reinforced Concrete. A working knowledge of the laws relating to engineering contracts and specifications is of great value to all engineers and a short treatment of this subject is given.

To aid in carrying on its work, the department is provided with suitable equipment, which includes, transits, levels, plane table, solar attachment, sextant, current meter, planimeter, protractor, rods, tapes and various hand instruments.

Men completing the work of the four-years course in this department are graduated with the degree of Bachelor of Science (B. S.). Those completing the additional fifth year course of study are given the advanced degree of Civil Engineer (C. E.).

A detailed description of each subject offered by the department follows:

1. **Plane Surveying.**—Two credits; second semester. The theory and practice of land surveying, including United States land surveys, computation of areas, dividing land and determining heights and distances. Field work with level and transit in determination of heights and distances and in making surveys of farms. Preparation required: Plane Trigonometry and Mechanical Drawing. Text: Breed & Hosmer's Principles and Practice of Surveying.

2. **Plane and Topographical Surveying.**—Four credits; first semester; prerequisite, Civil Engineering 1. Continuation of Plane Surveying together with the theory and use of the plane table, and of the transit and stadia. Pen topography and detailed field work; the construction of topographic contour maps, leveling, triangulation and adjustment of instruments. Text: Breed & Hosmer's Principles and Practice for Surveying.

3. **Graphic Statics.**—Two credits; first semester; prerequisite, Mathematics 9, 10 and 16, General Physics 3. Shears and bending moments in beams, center of gravity and moment of inertia of cross section, analysis of stresses in roof and bridge trusses, mill bents and three hinged arches by graphical methods. Text: Merriman and Jacoby's Roofs and Bridges, Part II.

4. **Highway Construction.**—Two credits; first semester. The location, construction and maintenance of country highways and city streets. Text: Blanchard and Drown's Highway Construction. Seniors and juniors take this subject at the same time, and it is given in alternate years only. It will be given in 1919.

5. **Hydraulics.**—Three credits; first semester; prerequisite, Mathematics 11, 12 and 16, General Physics 3. Hydrostatics and Theoretical Hydraulics. The study of flow of water through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; and application to engineering, water power plants and development. Text: Merriman's Hydraulics.

6. **Stresses.**—Four credits; second semester. Preparation required: Mathematics 13 and 16, and Graphic Statics. The theory and computation of stresses in roof and bridge trusses under dead, live and wind loads. Locomotive wheel loads on plate girders and bridge trusses. Text: Merriman and Jacoby's Roofs and Bridges, Part I.

7. **Railroad Surveying.**—Three credits; second semester; prerequisite, Civil Engineering 1 and 2. Reconnaissance, preliminary and location methods, with theory of curves and turnouts. Location of a line with the preparation of profiles and maps. The computation of earth-work and estimate of cost. Text: Allen's Railroad Curves and Earthwork. Seniors and juniors take this subject at the same time and it is given in alternate years only. It will be given in 1920.

8. **Structural Details.**—Two credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. Lectures on shop practice in making drawings and shop bills and in designing connections and other details for structural steel, including the design of beams, bearings, grillages, columns, struts and girders. Solution of problems required. Handbook: Carnegie Steel and Bethlehem Steel.

9. **Structural Steel Design.**—Three credits; first semester; prerequisite, Civil Engineering 3 and 6, Mechanical Engineering 15. The design and the making of general and detailed drawing of beams,



columns, grillages, a roof truss, a plate girder railroad bridge and a riveted or a pin connected truss bridge. Reference Book: Conklin's Structural Steel Drafting and Elementary Design.

**11. Irrigation.**—Two credits; first semester; prerequisite, Civil Engineering 5. A study of the principles of irrigation engineering; namely, a consideration of fundamental questions underlying the design and construction of works for holding and controlling the waters needed for agriculture; and of those matters necessary to insure the financial success of the enterprise. Text: Newell & Murphy's Irrigation Engineering. Seniors and juniors will take this subject at the same time, and it is given in alternate years only. It will be given in 1918.

**12. Bridges and Dams.**—Four credits; second semester; prerequisite, Civil Engineering, 3, 6, 8 and 9. Continuation of Civil Engineering 9 and a study of higher structures, including continuous, draw, cantilever and suspension bridges and metallic arches. The theory and design of masonry, walls, dams and arches. Text: Merriman and Jacoby's Roofs and Bridges, Part IV.

**13. Contracts and Specifications.**—Two credits; second semester. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's Engineering Contracts and Specifications.

**14. Reinforced Concrete.**—Three credits; second semester; prerequisite, Mechanical Engineering 15 and 16, Civil Engineering 3, Mathematics 10 and 13. A study of manufacture and properties of cement and reinforcing steel, and of the theory and design of plain and reinforced concrete construction. Text: Hool's Reinforced Concrete Construction, Vols. I and II.

**15. Sanitary Engineering.**—Three credits; second semester; prerequisite, Civil Engineering 5. The study of the principles to be observed in order that a pure water supply, and an efficient system of sewerage may be secured, and a study of the design, construction and operation of municipal water supply and sewage disposal. This subject is taken by seniors and juniors at the same time and is given in alternate years only. It will be given in 1919.

**16. Steel Buildings.**—Three credits; first semester; prerequisite, Civil Engineering 8 and 9. Design and general drawings of steel mill, mine and high office buildings, and arches.

**17. Dam and Reservoir Design.**—Three credits; first semester; prerequisite, Civil Engineering 3, 5 and 15, Mathematics 10, 11 and 13. The study of modern hydraulic construction, dams, reservoirs, levees, etc. Structures relating to water power, canals and irrigation.

**18. Hydraulic Motors.**—Three credits; first semester; prerequisite, Civil Engineering 5. A study of reaction and impulse wheels;

construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

19. **Railroad Engineering.**—Three credits; second semester. The construction of the roadbed, including ballast, crossties, rails, switches, culverts, maintenance of way and elements of railroad operation. Economic location, arrangements of yards, station and terminals. Train resistance. Application of electricity.

20-21. **Thesis.**—Two and three credits each semester. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress of the investigation or design to the professor having charge of the subject. The subject and plan of the work should be submitted to the professor in charge not later than November first of the current year.

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## ENGLISH

**Professor Bates; Associate Professor Powers; Assistant Professor Young.**

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition, and to give him an intelligent appreciation of English literature.

9-10. **Rhetoric.**—Three credits each semester; prerequisite, the English of the preparatory department. The main purpose of this course is to familiarize the student with the principles of rhetoric and to enable him to use them effectively in composition. To this end, written work is demanded constantly, and is carefully criticised both in the class room and in conferences between the instructor and the individual student. The work is supplemented with reading, in the choice of which the student is allowed considerable latitude.

11-12. **English Literature from 1625 to 1798.**—Three credits each semester; prerequisite, English 9-10. This course consists in a study of the literature, exclusive of prose fiction, of the ages of Milton, Dryden, Pope and Johnson. A large amount of reading and frequent papers are required. Attention is paid, in lectures, to literary movements and the relation between literature and other phases of the life of the time.

13-14. **English Literature from 1798 to 1892.**—Three credits each semester; prerequisite, English 11-12. This course covers the literature, exclusive of prose fiction, of the ages of Wordsworth and Tennyson. Much reading and occasional papers are required. Lectures are given on nineteenth century writers and literary movements, to-



gether with their relation to other phases of the life of the time. Frequent conferences are held between the instructor and the individual student.

15. **English Literature, exclusive of Drama, from the Beginnings to 1625.**—Three credits; first semester; prerequisite, English 13-14. In this course special stress is laid on ballad and epic, Chaucer, and the development of the language.

16. **English Drama from the Beginnings to 1625.**—Three credits; second semester; prerequisite, English 15. Shakespeare and his contemporaries receive the main emphasis.

17-18. **Scientific and Social Ideas in Recent Literature.**—Three credits each semester; prerequisite, English 9-10. The aim of this course is to familiarize the students in the technical departments with some of the main scientific and social tendencies of the present time as these tendencies are mirrored in current and late nineteenth century literature in England and America. Frequent papers and oral class reports are required.

19-20. **The English Novel.**—Three credits each semester; prerequisite, English 11-12. This course deals with the development of the novel from the middle of the eighteenth century to the end of the nineteenth.

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## MODERN LANGUAGE

**Professor Spencer; Miss Schneider; Mr. Mahany.**

A good reading knowledge of some modern language is imperative for students pursuing work along scientific, technical or historical lines, and they are indispensable as literary and cultural subjects.

In the General Science, the Home Economics and the Agricultural Courses of the College, French and Spanish are elective during the freshman and sophomore years. German will not be offered next year. More advanced elective work in this department is offered and the student is strongly advised to take a third year if possible of the language chosen.

### FRENCH

1. **French.**—Four credits; first semester. French grammar and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Text: Fraser and Squair's Grammar.

2. **French.**—Four credits; second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, con-

versation. Text: Super's Reader; *Le Tour de la France par deux Enfants*.

3. **French.**—Four credits; first semester. Readings from nineteenth century writers; Koren's French composition.

4. **French.**—Four credits; second semester. Continuation of French 3. Advanced composition and conversation.

5. **French.**—Three credits; first semester. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time.

6. **French.**—Three credits; second semester. Open to those who have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought.

### SPANISH

1. **Spanish.**—Four credits; first semester. Spanish grammar and composition. Rules of pronunciation and construction. Text: DeTornos' Combined Spanish Method.

2. **Spanish.**—Four credits; second semester. Continuation of Spanish 1. Vocabulary of every day life emphasized.

3. **Spanish.**—Four credits; first semester. Completion of all verb forms. Practice in connected speech. Selected readings from modern authors.

4. **Spanish.**—Four credits; second semester. Conversation on practical topics. Reading of Spanish newspapers and periodicals.

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## HISTORY AND POLITICAL SCIENCE

**Professor Harding; Assistant Professor Young.**

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

7. **Modern History.**—Three credits; first semester. Political and social history of Europe from 1500 to 1815. A survey of sixteenth century Europe, dynastic and colonial rivalry, European society and governments in the eighteenth century, the French Revolution and the era of Napoleon. Lectures, text-book, readings, papers and reports. Text: Hayes Political and Social History of Modern Europe, Vol. I.

8. **Modern History.**—Three credits; second semester. Continuation of History 7. History of Europe from the Congress of Vienna to the outbreak of the war of the nations, 1914. The era of Metternich, the growth of democracy and nationalism, the United Kingdom, Latin Europe, Teutonic Europe, the Russian Empire, the Eastern question, social factors in recent European history, national imperialism, international relations 1871-1914, and the outbreak of the great war. Text: Hayes Political and Social History of Modern Europe, Vol. II.

11. **American Government.**—Three credits; first semester. General survey of federal, state, and local governments in theory and practice. Emphasis in this course is placed upon real governmental operations. Text book, discussions and reports.

12. **Political Parties and Practical Politics.**—Three credits; second semester. This course consider such topics as the characteristics and importance of parties, nominating methods, party machinery, campaign methods, party finance, educational and other suffrage qualifications, election laws, the spoils system, civil service reform, machines and bosses, practical politics in legislative bodies, state and local politics, and remedies for legislative evils. Text-book, discussions and reports. Ray's Political Parties and Practical Politics.

13. **Economics.**—Three credits; first semester. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

14. **Sociology.**—Three credits; second semester. The fundamental principles of social science. Text-book, supplemented by lectures and special reports. Text: Blackmar and Gillin's Outlines of Sociology.

15. **Rural Sociology.**—Two credits; first semester. A general survey of the field of rural sociology, including the following topics: Types of communities, movements of population, advantages and disadvantages of farm life, social conditions and life of rural people, rural health and sanitation, the various social institutions of the rural community, boys' and girls' clubs, farmers' clubs, the grange, the rural church and the rural school, an analysis of the fundamental problems of rural life; the country life movement and the reorganization of rural social forces. Text-book, readings, and reports. Text, Gillett's Constructive Rural Sociology.

16. **Rural Economics.**—Three credits; second semester. The economic elements in the production and distribution of agricultural wealth, the agricultural market, determination of price, speculation,

business co-operation, credit facilities, ownership and tenancy, farmers' organizations, the farmer and legislation, problems of rural social life, the relation of the farmer to the state. Text-book, lectures, readings and reports.

**17. Industrial History of the United States.**—Four credits; first semester. This course deals with the economic aspects of American history until 1860; the land and its resources; colonial agriculture, industries, systems of labor and means of communication; economic aspects of the Revolution; struggle for commercial and economic independence; agriculture during the period of national development; introduction of manufactures; the tariff, banking and currency; domestication of the factory system; the economic aspects of the westward movement and public land policy; shipping and inland commerce to 1860; period of transformation in agriculture since 1840; relation of agriculture to other industries, to politics and to legislation; reactions of economic development in general upon politics and social life.

**18. Industrial History of the United States.**—Four credits; second semester. This course traces American economic development from 1860 to the present time. Economic causes and problems of the civil war; the period of western expansion in agriculture; agrarian discontent; production and export of raw materials; development of transportation and internal commerce; currency and banking problems; revival of protective tariffs; material prosperity; railroad combinations; business monopolies; labor problems; immigration problems; later commercial expansion; the conservation movement; reorganization of agriculture since 1890; industry and agriculture as affected by the great war; bearing of later American development upon politics and social life.

**19. The World War.**—Three credits; first semester. This is a course in the essentials, the aims, the causes and the historical antecedents of the world war. The fundamental causes of the war; its racial, economic and historical background; German-Austrian ambitions and aggressive policy before June 28, 1914; the Austro-Serbian controversy; the memorable twelve days; failure of diplomacy to avert war; violation of Belgian neutrality and its consequences; spread of the war—its world wide character and importance; innovation in warfare; German ruthlessness; violations of international law; summary and explanation of German policy. Lectures and readings. One period each week devoted to recent events.

**20. The World War.**—Three credits; second semester, continuation of Course 19. This course begins with the entry of the United States into the war; our historic attitude of neutrality; struggle to maintain our neutrality 1914-16; from neutrality to war 1916-17; why we are at war; course of the war by campaigns 1914-1918; war geography, war diplomacy, war finance; economic, industrial and military mobilization for war; proposals for peace; possibility of world federation—its indispensable elements; the war and the future of democracy.



## PUBLIC SPEAKING

**Professor Brown.**

To meet the ever increasing demands of the spoken word as a factor in leadership, and to develop skill in interpretative reading, the following courses are offered:

1-2. **Literary Interpretation.**—Three credits each semester. Voice training, bodily expression, oral interpretation and analysis of the lyric and drama. The aim of this course is to gain a keener appreciation of imaginative literature and to render it naturally and effectively.

3-4. **Extempore Speaking.**—Two credits each semester. For agricultural and general science students. Student trained to think and express himself while on his feet. Criticism on the organization and presentation of material. Attention is given to gesture, voice and such elements of grace as are essential to effective speaking. (Two sections.)

3a. **Extempore Speaking.**—Two credits; second semester. Same work as 3. Required of home economics students.

5-6. **Extempore Speaking.**—Two credits; first and second semester. Required of Engineering students. Same work as 3-4.

7. **Argumentation and Debate.**—Three credits; first semester. A study of the problems underlying conviction and persuasion. Analysis and briefing of public questions. Development of briefs into forensics and drill in their vigorous presentation. This course is especially recommended to those students who may be looking forward to taking part in intercollegiate debating.

8. **The Speech for Special Occasions.**—Three credits; second semester. A study of form for the special occasion, the speech of the president, the commemorative speech, the speech of dedication, of acceptance, of response, the speech of welcome. In addition to extempore work, written speeches will be required.

9-10. **Public Address.**—Two credits each semester; prerequisite, Public Speaking 3-4. **The Rhetoric of Oratory.** A study and presentation of the various forms of public address. The writing and delivery of orations. Attention to those elements of psychology which are basic in public speaking.

11-12. **Elementary Public Speaking.**—Four credits each semester. Articulation and flexibility of voice. The study and reading aloud of short poems, extracts from speeches for the development of ease and confidence. Extempore Speaking. Open to the pupils of the School of Agriculture. Elective in the junior or senior year.



## VOCATIONAL EDUCATION

Professor Brady.

During the last few years the demand for professionally trained teachers of agriculture, principals and superintendents of agricultural and industrial high schools, teachers of home economics (domestic science and art), related science and industrial positions in general has far exceeded the supply. In February, 1917, Congress, realizing the ever increasing demands for technically trained men and women, passed the Smith-Hughes vocational law which provides certain appropriations and standards for teaching training in the technical subjects.

Students wishing to receive the Bachelor of Science degree in any of the vocational teacher training courses under the Smith-Hughes law and the accompanying vocational teaching certificate in agriculture or home economics can do so by completing the 144 hours for graduation as outlined in the schemes of study for Teacher Training. (See schemes of study.)

Those desirous of obtaining the regular state certificate for South Dakota should elect fifteen hours work in the department of education (not omitting educational psychology, principles of teaching, history of education, observation and practice teaching).

Students expecting to teach manual training should complete the following work in mechanical engineering: Woodwork, six credits; mechanical drawing, three credits, and forging, two credits.

The courses in Education are planned to give a clear grasp of the organization and administration of Public Education, with special emphasis on the present vocational theory and vocational practice in educational procedure.

The purpose is to make all courses concrete and practical.

1. **Educational Psychology.**—Three credits; second semester. A systematic course treating of the fundamental laws of learning in animals and man, the effect of practice, the rate and limits of improvement, conditions for the most economical learning, measurements of progress in school subjects, mental hygiene, fatigue, transfer of improvement, etc. Lectures, recitations, required reading, experimentation.

2. **Principles of Vocational Teaching.**—Three credits; first semester. An application of the principles of psychology to the technique of vocational instruction; observations of the application of these principles in the practice school; discussions of various types of lessons; criticism of stenographic reports of recitations, motivation and project teaching; planning lesson syllabi; examinations, equipment, etc. Lectures, readings, observation, reports.

3. **Vocational Agricultural Education.**—Three credits; second semester. Organization and administration, equipment, courses of study, qualifications of supervisors, directors, teachers, plans for training of agricultural teachers under Smith-Hughes requirements, types of agricultural schools, special classes, federal and state board requirements, etc., etc. Lectures, required readings, discussions, special reports, observation.

4. **Unit Courses in Methods.**—a. **Special Methods in Teaching Home Economics.**—Three credits; second semester. b. **Special Methods in Teaching Agriculture.**—Three credits; first semester. Under the unit plan the work of the semester will be divided into three equal parts, each part dealing with a distinct division of the subject. Possibly different units of work will be given by different teachers, e. g., in Home Economics the first third of the semester may be given to special methods in the teaching of millinery in high schools, the second to special methods in the teaching of cookery and the third to the teaching of sewing, etc. It is possible for the student to register for only the division of the work which is needed and receive unit credit in accordance.

5. **Vocational Educational History.**—Two credits; first semester. A consistent survey of such periods in the history of educational progress as will serve in the interpretation and solution of our present vocational problems. The rise of specialization in educational demands, evolution of modern vocational high schools and vocational departments, guild systems, apprenticeship labor, state and federal control, public systems of education, rise of education of women, advance in training of vocational teachers, foundations for the present scientific, psychological and sociological tendencies in education; the effects of the disciplinary and humanistic conceptions of education upon vocational progress—contributions to education by Pestalozzi, Froebel, Milton, Spencer, Dewey, Bacon, Washington, Jefferson, Horace Mann, etc.

6. **School Administration.**—Three credits; second semester. Organization and Administration of Public School Systems in the United States. Measurement as a modern scientific instrument of supervision and administration. A brief introduction to statistical method, frequency tables, the application of scientific forms to the measurement of school achievement; fundamental bases for organizing school children, retardation, acceleration and elimination; grading and promo-

tion; special classes; home work; medical inspection; extension of the school activities; special modifications of the course of study; discipline; compulsory education; responsibility of the schools to the public; comparative systems of education both local and foreign. Lectures, discussions, assigned readings, reports.

7. **Practice Teaching.**—Four credits, hours to be arranged, open to seniors who have had twelve hours or equivalent in education. Daily lesson plans carefully inspected then followed by teaching. Daily practice and observation in the class room with full charge of class under competent supervision.

Note: Practice teaching is carried on in the Secondary School of Agriculture of the State College, and in the City High School of Brookings. It is supervised by the heads of the respective departments, by the principal or superintendent of the respective school and the department of Education.

8. **Vocational Educational Sociology.**—Three credits; second semester. Problems of vocational guidance and vocational placement, tests for vocational selection, demonstrations and applications of tests, modern social demands for vocational reorganization of administration, methods of instruction, courses of study, equipment, teacher training, etc. Public sentiment as a weapon of social control, industrial hygiene, vocational ethics, vocational social classes. The course will include several concrete studies of vocational surveys. Lectures, discussions, problems, survey practice and assigned readings.

9. **Rural Education.**—Three credits; first semester. a. Rural life conditions; b. Need for rural life reorganization; c. Fundamental principles involved; d. Noteworthy examples of new types of rural school organization, new curricula, the new teacher, buildings, equipment, etc. Lectures, readings, reports, observations.

10. **Vocational Secondary Education.**—Three credits; second semester. Essential facts of adolescence; facts, causes and remedies of retardation and elimination; types and definitions of vocational schools; vocational legislation; certification of vocational teachers; correlation of technical courses with related science courses; nature of follow-up work; special classes; measuring vocational products, etc. etc. Lectures, discussions, assigned readings.

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## AGRICULTURAL JOURNALISM AND ADVERTISING

### Professor Starring.

The following introductory courses in agricultural journalism are designed to assist prospective rural leaders in writing entertainingly and helpfully upon subjects in which they are interested. News values, fact values, and proper emphasis on them are matters of prime importance. The need of train-

ing in agricultural advertising is also apparent to the prospective farmers who intends to receive the greatest cash return from his efforts. The course will be especially helpful to those who become public servants as teachers, county agents or specialists, for they will be expected not only to prepare many articles for publication, but also to assist others with advertising and sales problems.

1. **Elements of Agricultural Journalism.**—Two credits; first semester; for juniors and seniors. A study of the news style of writing. Lectures on newspaper style as a model in effective writing. Lectures on methods of preparing copy for agricultural and technical journals. Practice in writing agricultural news for publication.

2. **Agricultural Advertising.**—Two credits; second semester; for juniors and seniors. The principles of advertising. Use of language, type and media to assist in selling agricultural products. Writing of sale bills. Planning and arranging sale books. Use of illustrations. Design of farm letterheads. Composition of effective sales correspondence. Advertising farm meetings, county fairs, etc.

3. **Journalism for Women.**—One credit; second semester; for senior girls in home economics. Writing upon home economics subjects for farm papers and women's journals. Method of study similar to course 1.

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## MATHEMATICS

**Professor Brown; Assistant Professor Mills.**

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstration forming an important part of each course.

A course in the theory of teaching mathematics may be given in case a sufficiently large number desire it.

8. **College Algebra.**—Three credits; first semester; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9-10. **Plane and Spherical Trigonometry.**—Two credits each semester; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of triangles.

11. **Analytic Geometry.**—Five credits; first semester; required in the Engineering Courses, sophomore year; prerequisite, Mathematics 8 and 9.



12. **Calculus.**—Five credits; second semester; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. **Calculus and Analytic Mechanics.**—Five credits; first semester; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solution of mechanical problems.

14. **Analytic Mechanics.**—Three credits; second semester. Continuation of Mathematics 13.

15. **General Astronomy.**—Three credits; second semester; prerequisite, elementary mathematics. The text will be covered and frequent use made of the instruments.

16. **Elementary Mechanics.**—Two credits; second semester; prerequisite, Mathematics 8 and 9.

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## PHYSICS

**Professor Mathews, Associate Professor Hoy.**

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest opera chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are furnished for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, microscopes, photometers, stereopticon (arc light), standard cells, dynamos, electrometers, transformers, galvanometers, storage batteries, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, Kelvin's current balances, lathe and wireless telegraphy and X-ray apparatus.

The following subjects are offered in this department:

For Physics 1 and 2, see the preparatory department.

3. **General Physics.**—Five credits; first semester. Young ladies following the General Science Course may elect Home Economics 4 and



7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids, heat and sound with numerous examples. Exact measurements of mass, distance, time, calorimetry, nature and velocity of sound, etc.; study of electrical and magnetic fields.

4. **General Physics.**—Five credits; second semester. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; refraction and reflection of light, interference and color. Laboratory work on topics mentioned.

5. **Advanced Physics.**—Four credits; first semester; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis. Laboratory work and measurements covering topics mentioned. Text: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

7. **Heat.**—Four credits; first semester; prerequisite, Physics 5. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity, and dynamical equivalent of heat. Laboratory work covering topics mentioned.

8. **Light.**—Four credits; second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescence, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

9. **Household Physics.**—Three credits; first semester; prerequisite, Mathematics 4. Especial emphasis is laid on practical applications of heat, machines, electricity, etc., in the home.

10-11. **Practical Physics.**—Three credits; first and second semesters. This course is open to students in the agricultural groups. The general subjects discussed in physics will be considered, but special emphasis will be placed upon topics of practical interest and upon practical application of physical principles.

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## BOTANY AND PLANT PATHOLOGY

Professor Michel; Mr. Hogstad.

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and function are studied, as well as the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as a foundation for courses in forestry, plant breeding, plant pathology, etc.

This instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are well equipped with microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete convenient herbaria of the flowering plants and fungous flora of the northern United States.

1. **Principles of Botany.**—Four credits; first semester. This course is intended primarily for such students as can devote but one semester to the study of botany. A general survey of the plant kingdom with emphasis upon such plants as are of greatest economic importance.

2. **General Botany.**—Four credits; first semester; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

3. **General Botany.**—Four credits; second semester; prerequisite, Botany 2.

4. **Plant Physiology.**—Four credits; second semester; prerequisite, Botany 2 and 3, Chemistry 11. This course deals with the life processes of plants, such as photosynthesis, respiration, fermentation, transpiration, irritability, nutrition, growth, and reproduction; and how these processes are influenced by changes of environment, such as differences in amount of moisture in air and soil, amount of light, and effects of nutrient and injurious salts in the soil, etc.

5. **Plant Pathology.**—Four credits; first semester; prerequisite, Botany 2 and 3. The first part of the term is devoted to the cause, nature and classification of the fungi, special emphasis being placed on the organisms of economic importance; the latter part of the course is devoted to the morphology of the diseases and their control, especially those found in South Dakota. In the laboratory work the student is, as far as possible, brought into direct contact with the diseases as found in the field.

6. **Advanced Plant Pathology.**—Elective in the junior or senior year. The course will be given to such students as have had Botany 5 or equivalent work. The laboratory hours and the recitations to be arranged with the instructor. The number of credits will depend upon the amount of time given to the work, which will consist of individual laboratory work and assigned readings.

7. **Classification of Pteridophytes, Gymnosperms, and Angiosperms.**—Four credits; first semester; prerequisite, Botany 2 and 3. The classification of ferns, conifers and flowering plants. Especial at-

tention will be given to plants of economic importance in South Dakota; such as trees, grasses, weeds and poisonous plants. A number of field trips will be made during the fall. Part of the laboratory work may be done by making a collection of plants during the summer.

**8-9. Plant Histology.**—Four credits each semester; prerequisite, Botany 2 and 3. The work will consist of the embedding, sectioning and staining of tissues from the various groups of plants. Text-book: Chamberlain's Methods in Plant Histology.

**10. Heredity.**—Three credits; second semester. The work is offered in connection with the Department of Horticulture, which will give practical work along the line of plant breeding. This course deals with the principles of variation and heredity, and their bearing upon the theory of organic evolution. The first part of the semester will be devoted to the general principles of heredity and their application to man, the latter half will deal with plant breeding and its practice in this state. Texts: Castles' Genetics & Eugenics and Bailey's Plant Breeding.

**12. Economic Botany.**—(Weeds and Poisonous Plants.)—Three or four credits; second semester. A study of our common weeds; their methods of reproduction and disposal, methods of eradication, significance of dormancy and longevity of seeds, determination of weed seeds especially such as are found in grass and grain seed. In the spring seeds will be planted and the seedlings studied. Students intending to take this course should make a collection of weeds and weed seeds in the summer or fall.

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## ZOOLOGY AND RURAL SANITATION

Professor Miller

Students of Agriculture, Domestic and General Science must have a fundamental knowledge of animal structure, physiology and the principles of growth and development. It is equally true that such classes of students should have a fundamental knowledge of the principles of Bacteriology and Sanitation. It is the aim of the department to give this knowledge. Besides this the department offers training to those who wish to specialize. For such students excellent training is offered in methods of research and technique.

Students who contemplate the study of Veterinary or Human Medicine will find it much to their advantage to elect advanced work in the department. For some of the pure medical sciences full credit is usually given and the student is privileged to elect more advanced work in the professional school.

The department is fully equipped to carry out the work offered. Microscopes, microtomes, ovens, sterilizers, incubators, glassware, reagents, type specimens, skeletons and a well chosen library of five hundred volumes and files of the chief journals offer apparatus and literature for thoroughly scientific work.

3. **General Zoology.**—Four credits; first semester. A study of the types of animals and fundamentals of physiology. Text: Shiply and McBride.

4. **Physiology.**—Four credits; second semester. Human physiology of college grade accompanied by mammalian dissection, as well as experimental work. Text: Howell's Human Physiology.

5. **Physiology.**—Four credits; first semester. Human physiology especially adapted to students of pharmacy. The laboratory work will consist of mammalian dissection, as well as physiological experiments. Text to be announced.

6. **Pharmaceutical Bacteriology.**—Four credits. A course in the fundamental principles of Bacteriology adapted to meet the needs of the practising pharmacist. Laboratory work will include ordinary laboratory methods and the simple ones for water determination.

7-8. **Histology.**—Four credits each semester. The structure of the cell and the tissue elements, together with microtechnique, is given during the first semester. During the second, vertebrate organology or the microscopical structure of the organs of the vertebrates is the theme. The last semester may be elected separately by those who make proper arrangements with the instructor. Text: Schaffer, Bohm Davidoff, or Jordan's Histology.

9. **Vertebrate Embryology.**—Three credits; second semester. Study of the principles of development including cleavage, formation of the germ layers and differentiation of the organs of the vertebrate body. Chick and pigs embryos are used for study. Text: Prentiss & Avery.

10. **Bacteriology.**—Three credits; first semester. The course includes the study of morphology and biology of the bacteria; special reference is made to public health. The laboratory work consists of technique and the study of several of the common forms of bacteria. Text: Jordan. References.

11. **Applied Bacteriology.**—Four credits; either first or second semester. Class conferences twice a week. Laboratory work on methods of air, water and soil determination.



## ENTOMOLOGY AND NATURE STUDY

Professor Severin; Mr. Gilbertson.

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, the department is provided with a large number of lantern slides, microscopic slides, alcoholic and formalin preparations, as well as samples of insecticides and fungicides, spray machinery and accessories, and other apparatus used in combatting insects. The department is well provided with all the apparatus necessary for biological work.

**3-4. Agricultural Entomology.**—Two credits first semester, three credits second semester. A general course dealing with the anatomy, physiology, embryology, behavior, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

**5-6. Economic Entomology.**—Three credits each semester; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects with a study of insecticides, spraying machinery and other apparatus used in combatting insects. The student will be given an opportunity of preparing sprays and gases used in combatting insect pests, and demonstrations will be offered in the practical application of the insecticides. Each student will be required to work out the life history of three species of insects that are of economic importance and to mount these in exhibit cases.

**7-8. Systematic Entomology.**—Two or more credits each semester. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give the student an idea of the aims and methods of classification. Each student will be required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

**9. Household Pests.**—Three credits; second semester. The household insects and other animals that are of economic importance



will be especially emphasized in this course, together with methods of extermination.

10. **Medical and Veterinary Entomology.**—Two credits; first semester. The greater share of the semester will be devoted to a discussion of the diseases which are disseminated through insects and which affect man and domestic animals.

11. **Bird Study.**—Three credits; second semester. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds, while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's Handbook of Birds of Western North America.

12. **Nature Study.**—Three credits; first semester. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature point of view and the course will be a discussion of methods and materials as well as an elementary science treated from the biological side.

13. **Animal Behavior.**—Two credits; first semester. The evolution of animal behavior forms the principal theme of this course and is of much significance for the study and correct understanding of human psychology and sociology. This course will be useful to those engaged in educational work.

14. **Beekeeping.**—Three credits; first semester. Especial emphasis will be placed upon the practical side of Beekeeping in this course. The laboratory work will deal with a study of Apiary methods, including the manipulation of bees, spring management, swarm control and increase, production of extracted and comb honey, care of bees in winter, apiary apparatus and the anatomy, physiology and development of bees.

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## CHEMISTRY

**Professor Shepard; Associate Professor Dunbar; Assistant Professor Binnewies; Mr. Sherwood; Mr. Rowe.**

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, is furnished. The main laboratory,

which is located on the first floor of the Chemistry and Pharmacy Building, accommodates one hundred and twenty students, all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates sixty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, and electric heating appliances.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemner quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The organic laboratories are capable of accommodating eighty students and are equipped with a large assortment of apparatus especially fitted for this branch of chemical science which today forms so important a part of the prospective chemist's education. Organic synthesis of dyestuffs and drugs forms a large part of the work of advanced students.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

1. **Elementary Inorganic Chemistry.**—Four credits; first semester; prerequisite, Physics 2. History of Chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids, and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. **Elementary Inorganic Chemistry.**—Four credits; prerequisite, Chemistry 1. This semester is devoted to a study of the metals, their occurrence and commercial production from the ore, they being studied from the viewpoints of industrial use and the identification by analytical processes of the metal ions; and the working of a list of unknowns. Text: Shepard's Elements of Chemistry.

3. **Quantitative Chemistry.**—Three credits; second semester; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical com-

pounds, e. g., calcite, magnesium sulphate, metallic ores, the first half of the work being gravimetric and the latter half, volumetric. Text: Olson's Quantitative Chemistry.

4. **Chemistry and Physiology of Foods.**—Four credits; second semester; prerequisite, Chemistry 1 and 2. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulterations. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives. Lectures and laboratory exercises.

5. **Agricultural and Sanitary Analysis.**—Four credits; first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Analysis of disinfectants, germicides, water-analysis, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.**—Three credits; second semester; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.**—Three credits; first semester; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples, including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaching and dyeing. Text: Thorpe's Industrial Chemistry.

8. **Household Chemistry.**—Four credits; first semester; elective in the sophomore year of the Home Economics Course; prerequisite, Chemistry 1 and 2. Students in four year Home Economics Course intending to specialize in Chemistry should take Chemistry 3 instead of Chemistry 8. This course includes the chemistry of cooking, baking, fermentation, cleansing agents, water, soaps, inks, stains, disinfectants, preservatives, etc., as applied to good housekeeping in every day life. Lectures, notes and references. Text: Snell's Elements of Household Chemistry.

9. **Organic Chemistry.**—Five credits; first semester. The Aliphatic compounds. Chemical theory and principal compounds of the paraffine series. The preparation of typical members. Typical analytical methods. Text: Norris' Organic Chemistry with explanatory lectures.

10. **Organic Chemistry.**—Five credits; second semester; a continuation of Chemistry 9. Theory, structure, preparation and analysis of the Benzenes, Naphthalenes, Anthracenes, Pyridines, Alkaloids, Amino Acids, Terpenes, Dyes, etc.

11. **Organic Chemistry.**—Four credits; first semester; prerequisite, Chemistry 1 and 2. An elementary course in Organic Chem-

istry. Includes the general theories, and typical reactions of the aliphatic and aromatic compounds. Preparatory to the practical application of this knowledge in advanced agricultural work. Required in sophomore year of Agricultural, Domestic Science and Pharmacy courses. Text-book: Norris' Organic Chemistry.

12. **Elementary Inorganic Chemistry.**—Required of third year students of School of Agriculture. May be substituted for Chemistry 1 should students desire to enter a course leading to a degree. An applied course in elementary chemistry.

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## PHARMACY

Professor Serles; Mr. Hogstad.

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### PURPOSE

The purpose of this department is to train young men and women in the science of pharmacy. The passage of the Food and Drug Act by Congress, and similar legislation by our own state has placed very great importance on pharmaceutical education. Under the present commercial conditions it is nearly impossible for one to prepare himself to meet the requirements of these laws except by taking a thorough college course.

The demand for educated pharmacists is becoming greater every day. In fact, even at present, some of the states will not allow one to take the examination for registration unless he is a graduate of a reputable school. This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

Graduates from the Department of Pharmacy in the State College have been uniformly successful in passing the State Board examinations, only three having failed to meet the requirements of the Board during the past nineteen years.

Among the regulations of the South Dakota State Board of Pharmacy is the following:

"Hereafter during the year 1906, all applicants appearing for registration by examination, must present with their application an affidavit showing that they have completed a course of study (or its equivalent) of one year high school work. In 1907, two years; in 1908, three years, and in 1909



the presentation of a high school diploma will be required. These requirements were recommended by the Association in annual meeting at Canton in 1903. It is therefore expedient that all proprietors doing a drug business in this state acquaint their clerks and apprentices with the above rule."

Further recommendations were made by the State Board at a meeting held in Sioux Falls, in January, 1918, which are in substance: "That it shall be deemed expedient for all applicants appearing before the State Board for registration to have had two years of practical experience in a drug store where prescriptions are regularly compounded, together with a Ph. G. from a reputable school of pharmacy, or one year of experience and a Ph. C. degree, before said applicant should appear for examination."

In order to harmonize our work with this regulation we require the completion of four years of high school work or its equivalent. While this is a much higher requirement than most schools demand, the results have justified our judgment, for at present there are but three of our graduates who have taken the state examination who are not registered.

This line of work offers many inducements to young men. The requests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

Beginning with the school year September, 1918, the "South Dakota School of Pharmacy" will offer a three-years course in pharmacy leading to the degree of Pharmaceutical Chemist (Ph. C.). This course has been especially outlined to meet the ever increasing demands for more widely trained men not only in the "Art of Compounding," but in the analysis and synthesis of pharmaceuticals as well as to give the student proper foundations for research problems.

The students finishing the two years course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). These are the only courses of their kind offered in the state and receive the hearty commendation of the State Board of Pharmacy. All the work of both courses may be applied towards the degree of Bachelor of Science. For the additional sub-



jects required, see Pharmacy Schedule. This longer course is recommended to those who intend to take up the study of chemistry, medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

Below is given a description of the subjects that are required in the two and the three years courses:

1. **Pharmaceutical Latin.**—Three credits; first semester; first year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Muldoon's Pharmaceutical Latin.

2. **Materia Medica.**—Five credits; first semester, second year; prerequisite, Pharmacy 10 and 11. Medical properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive careful treatment. Text: Wilcox's Materia Medica and Therapeutics.

3. **Materia Medica.**—Five credits; second semester, second year. Continuation of Pharmacy 2. Text: Wilcox's Materia Medica and Therapeutics.

4. **Pharmacy.**—Five credits; first semester, second year; prerequisite, Chemistry 2 and Pharmacy 6 or 13.

5. **Practical Pharmacy.**—Four credits; second semester, second year. Preparation of waters, syrups, mucilages, tinctures, fluid extracts and other galenicals prescribed by the instructor. Text: Remington's Practice of Pharmacy, Vol. 1.

6. **Pharmaceutical Arithmetic.**—Two credits; first semester, first year. Required of the two years' students. The course covers the study of the relationship of the various weights and measures, the types of nomenclature used in prescription writing. Alligation, the solution of chemical problems, and the shorter methods dose determination will receive special attention. Text: Sturmer's Pharmaceutical Arithmetic.

7. **Pharmacy.**—Five credits; second semester, second year; prerequisite, Pharmacy 4 and Pharmacy 6 or 12. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's Practice of Pharmacy, Vol. 2, and Euddiman's Incompatibilities in Prescriptions.

9. **Volumetric Analysis.**—Four credits; second semester, second year; prerequisite, Chemistry 1 and 2. There are at present in the U. S. Pharmacopoeia 315 volumetric, gravi-metric and other assays.

In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. Text: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis; lecture notes by the teacher.

**10. Pharmaceutical Botany.**—Four credits; first semester. Designed to acquaint the student with the characteristics of the principal groups of plants, emphasis being placed on their economic value. The course also includes the examination of cell and cell contents, and plant structure, a study being made of several drugs to acquaint the student with the pharmacognostical characteristics of stems, roots, leaves, flowers and fruits. Text: Kraemer's Applied and Economic Botany.

site, Pharmacy 10. Devoted to the study of the important official and non-official drugs. In connection with this work the student is taught the principles of medicinal plant cultivation, the work being carried on in the medicinal plant garden connected with the School of Pharmacy. Text: Kraemer's Scientific and Applied Pharmacognosy.

**12. Inorganic Materia Medica.**—Two credits; first semester; prerequisite, Pharmacy 10 and 11. Required of three-year students. A careful study of the inorganic salts used in medicine as to their dosage, therapeutic value and mode of administration. Text: Wilcox's Materia Medica and Therapeutics.

**13. Theoretical Pharmacy.**—Three credits; second semester, second year. Required of the three-years students. A study of the comparison of the weights and measures of the various systems and of the theory of the application of the methods used in pharmaceutical manufacture. Text: Remington's Practice of Pharmacy, Vol. 1, with lectures by the instructor.

**14. Dispensing.**—Four credits; second semester, third year; required of the two-year and three-year students; prerequisite, Chemistry 1 and 2, and Pharmacy courses 9 and 13. The course is so designed as to acquaint the student with the actual work that comes before him in the store, and to give him the practical side of the work previously given in lectures on incompatibility and prescription filling. Text: "The Art of Compounding," Scoville.

**15. Drug Assaying.**—Four credits; first semester, third year; prerequisite, all the courses of pure Chemistry and Pharmacy that are given in this course, or their equivalent, the latter point to be determined by the head of the department. The course will be a continuation of Course 9, taking up the more difficult assays and determinations found in the U. S. P. and N. F. The student may also take up research problems, provided that his work in that line has been of a sufficiently high standard. Texts: U. S. P., N. F., Schimpf's Volumetric Analysis.

**16. Drug Assaying and Urine Analysis.**—Four credits, second semester, third year; the first part of the course will be a continuation of Course 15, but during the latter part of the term the work will consist largely of a systematic and careful study of the urine, with enough outside reading and lecture work to aid the student in his interpretation of the results which he may find. Texts: The same as those used in course 15, together with Holland's Medical Toxicology, and a large number of Physiological Chemistrys for references.

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## MUSIC

**Professor Hedge; Assistant Professor Peterson; Assistant Professor Christensen; Miss Burrows; Mr. Cook.**

The purpose of this department is to give the very best musical training possible at a minimum cost, without sacrificing the high standards of the institution.

It is generally recognized that few branches of study require a greater and broader training of the mind than does the study of music, and not only cultivation of the mind, but of the emotions as well. The emotional is a phase too often neglected in education, although it has so important a part in life. In music one must learn to control—to keep in the background—one's own emotions, in order to give true expression to the thoughts of the master minds which have so wonderfully woven the beautiful harmonies.

A knowledge of music also serves to give proper balance to an education, the aesthetic side of which is too often neglected.

Our course is arranged with a view to supplying the needs more especially of those who wish to broaden themselves and to make it a part of their general education.

## ADVANTAGES

Opportunities are given for the hearing of the best music during the school year, which is a most important adjunct to proper musical education. These occasions include our high-grade faculty concerts, and an Artists' course which consists of recitals by some of the best musicians of the country. It is also planned to bring one of the Symphony Orchestras here for a concert each season.

In addition to these advantages, Professor Hedge will train and direct, free to all College students and to outside singers, a choral union, a chapel choir of twenty-four picked voices, a men's glee club, and a womens glee club.

One credit a year will be given to Juniors and Seniors for choral singing in either Choral Union or Chapel Choir, provided the work is carried the full school year.

Professor Christensen will conduct the College bands and orchestra, both of which have already made an excellent reputation throughout this part of the country.

The Men's Glee Club and Orchestra have made tours during the last three years through different parts of the state and have met with great enthusiasm and success.

Recitals are also required of all students at various times during the year and attendance is obligatory upon every student in this department.

### CONDITIONS FOR ENTRANCE

The candidate for admission to the College must be at least fourteen years of age and of good moral character, and must have completed the work of the public schools as far as the ninth grade.

Students of music who have not completed the requirements for entrance to the freshman class will be required to take at the same time at least ten hours work of the preparatory course.

### STUDENTS' CONVOCATION

The Music Students' Convocation meets once each month, at which programs are given by students or faculty. As this is part of the school work each student of music is required to be present.

### COURSES

Three courses are available for students of this department:

1. Preparatory.
2. Academic.
3. Collegiate.



The Preparatory Course is open to all beginners and consists of rudiments, tone production, formation of correct habits of thought and execution, etc.

The Academic Course is for those who do not desire to complete the full course, but only to become fairly proficient as performers and to secure a general knowledge of the fundamental principles of the art. At the completion of this course, the student is awarded a certificate of proficiency or merit.

The Collegiate Course leads to graduation and consists of four years' work. To complete this course, the student must have secured a thorough knowledge of harmony, theory and history as outlined in these respective courses. Upon its completion, the student will be given a diploma in music, provided the entrance requirements to the freshman class of the college have been completed.

For convenience, music students who have completed the entrance requirements to the Freshman class and one year of the Collegiate course in music will be ranked as though they were carrying full college work, provided that in addition to the full Collegiate courses in music they carry other college work amounting to twelve credits. In such work of the department as may be sufficiently advanced, college credit will be given and a reasonable amount counted towards the completion of the requirements for the Bachelor's degree.

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## VOICE

Prof. Hedge

The method used is the correct placing of the voice so that the pupil can produce with equal ease and firmness and with an even quality, all tones from the lowest to the highest. The mechanism of the voice is explained as far as necessary.

In correct breathing, correct position in singing and chest development lies the foundation of voice building.

The course of instruction is based on the Italian School of training the voice. The fundamental principle of the old Italian teachers was to poise the voice. From this comes the even scale, the range, the power to sustain, and the agility, all of which combined formed the "bel canto" or beautiful singing.



Special attention is paid to the needs of each individual, with exercises and studies carefully selected according to the requirements of each voice.

Study will be made of the interpretation of songs and ballads chosen from the best of the German, Italian, French, English and American schools, with strict attention to phrasing, enunciation and rhythm.

### Voice Outline

First Year.	Second Year.	Third Year.
Voice Culture.	Voice Culture.	Vocal Culture.
Piano.	Piano.	Song Literature.
Sight Reading.	Harmony.	Theory.
Musical History.	Languages.	Church Music.
Languages.	Ear Training.	Hymnology and
Songs.	Songs.	Oratorio, Opera Airs
		Harmony.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

### First Year

The formation of tone; elementary exercises for the development of the voice and art of respiration; Seibers' thirty-six eight measure vocalises; exercises in articulation and art of phrasing; easy and pleasing songs in English.

### Second Year

Exercises in scales, precision and flexibility; studies by Lutgen, Concone, Tosti, Vaccai; songs from German and English composers.

### Third Year

Exercises in scales, precision and flexibility continued; advanced vocalization; songs by Schubert, Schumann, Franz, Brahms, and arias and duets from operas.

### Fourth Year

Exercises continued as above with studies in bravura singing. Exercises and solfeggios used, classified according

to difficulty, are those of Concone, Marchesi, Lamberti and Brambilla. Recitatives and arias from the standard oratorios and operas.

For the Diploma in vocal music, the pupil must complete the courses in harmony, theory and history of music, ear training and sight reading, and must also complete the work of the academic course in instrumental music.

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## PIANO

### Mr. Peterson; Miss Burrows

The study of piano is conducted with a view to balancing more perfectly the training of the mind and the cultivation of technical power. Too often stress is placed upon one or the other, more frequently the latter, to an extreme. Technic is but the means to an end; i. e., the correct interpretation of the masters, and should be so considered.

Special attention is directed from the very beginning to the student's habit of thinking. This is done largely through the method of harmonic analysis and memorizing in an orderly and concentrative manner.

The musical side of the student's personality is brought into action through intelligent and artistic interpretation and its development is materially assisted by his having the opportunity to hear good music, artistically rendered as often as possible.

In technical development, special work is given for the acquisition of finger strength and independence, a correct position of the hand and purity of tone. Since it is now generally believed that the purest and sweetest tones are secured from direct finger action, this is much emphasized throughout the course.

These fundamental ideas are associated with the principle, the understanding of which is so necessary to the successful teacher, that efforts should continually be made to render the study of the piano less irksome and as intensely interesting to the student as it can be made.

### Piano Outline

First Year.	Second Year.	Third Year.
Piano.	Piano.	Piano.
Harmony.	Harmony.	Harmony.
Musical History.	Violin or Voice.	Violin or Voice.
Musical Literature and Analysis.	Ear Training. Theory.	Ensemble Playing.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

### Preparatory Course

Studies from Czerny, Gurlitt, Macdougall, Bach and other composers; sonatinas from Clementi, Kuhlau, Gurlitt, etc.; the easier sonatas of Haydn and Mozart, and the less difficult compositions of Schumann, Grieg, MacDowell, Schubert, Chopin and others.

### Collegiate Course

**First Year.**—Etudes of Heller, Czerny, Foote; selections from the Bach suites and sonatas of Beethoven, Haydn and Mozart; compositions of Mendelssohn, Schubert, Chopin, Schumann, Grieg, MacDowell, etc.

**Second Year.**—Studies from Bach, (inventions and suites), Heller, Czerny, and others; sonatas of Mozart and Beethoven; solos selected from Weber, Chopin, Mendelssohn, Schumann, Grieg, MacDowell, Liszt and others; also some of the easier concertos of Mendelssohn, Reinecke, Weber, Mozart, etc.

(For examination last year, students played a movement from Mendelssohn's Concerto in G Minor, a Bach Fugue and an expression piece selected from some of the composers of the Romantic School).

**Third Year.**—Studies from Bach (Well Tempered Clavichord), Chopin, Liszt, Foote; sonatas of Schubert, Beethoven, Grieg, Weber, Chopin; solo work of Mendelssohn, Weber, Schumann, Liszt, Rubinstein, Grieg, MacDowell and the modern French, Russian and American composers; concertos of Beethoven, Rubinstein, Chopin, Schumann, Saint Saens, etc.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

## VIOLIN

Mr. Christensen; Mr. Cook

Position, tone production on open strings, most important rudiments of musical theory in general, Hohmann's Violin School, Book 1; duets by Gebauer and Mazas; miscellaneous solos with piano accompaniment.

### Collegiate Course

**First Year.**—Two octave scales in all major and minor keys; Sevcik, Opus 1, Book 1, Violin Technique; study of the positions, Hohmann, Book IV; studies by Wohlfart, Opus 45, Books I and II; miscellaneous solos with piano accompaniment.

**Second Year.**—Three octave scales in all major and minor keys; Sevcik, Opus 7, Violin Technic, Books I and II; Sevcik's "Four Thousand Bowings;" Kayser's Etudes, Opus 20, Books I and II; Mazas, Opus 36, Book 1, Violin Studies; solos with piano accompaniment by DeBeriot, Wieniawski, Mendelssohn, etc.

**Third Year.**—Sevcik, Opus 7, Books I and II; Sevcik's "Four Thousand Bowings;" Schralieck's Technical Studies; Mazas Studies, Opus 36, Book II; etudes by Dont and Kreutzer; solos by Wieniawski, Vieuxtemps, Mendelssohn, Bruch, Godard, etc.; concertos by Viotti, De Beriot, etc.

**Fourth Year.**—Graduate programs prepared, the science of building and arranging programs, advanced work given to develop and broaden the musical as well as the educational side.

### Violin or Violoncello Outline

First Year.

Violin or Cello.

Harmony.

Piano.

Musical History.

Second Year.

Violin or Cello.

Harmony.

Piano.

Musical Literature  
and Analysis.

Theory.

Ear Training.

Third Year.

Violin or Cello.

Harmony.

Ensemble Playing.

### PIPE ORGAN

At the present the College has no pipe organ, but it is expected that a very fine organ will be installed in the College Auditorium the coming school year, and anyone desiring to take up the study of this department will have the opportunity of taking the full organ course here at State College.



## HARMONY.

Mr. Peterson

In the study of harmony, the older ideas of harmonizing a given melody or figured bass are discarded as far as possible. The student is taught from the beginning to write his own melodies for harmonization, thus, while stimulating his originality and inventive ability, taking from the study of harmony that mechanical and superfluous aspect so often too apparent to the pupil, and firmly establishing its proper place in the study of music.

In the first year (collegiate) the student receives ear training and the rudiments of harmony, including intervals, scales and chord formation, chords and their tonal relations, melody writing and simple harmonization.

In the second year, melody writing is continued, harmonization a little further developed, new chords introduced, etc.

The third year leads to altered chords and modulation, elaboration of melody, imitation, counterpoint, canon, fugues and composition in the easier forms.

This study is generally conducted in classes of four or five, but those who desire quicker advance may secure private lessons at special rates, according to the statement upon another page.

## HISTORY

The classes in the study of musical history are conducted by Miss Burrows. This clearly follows the development of music and musical instruments from the earliest to the present time. This is a subject upon which every musical student should be well grounded, and some knowledge of it is essential in the general educational equipment of everyone who is at all musically inclined. An examination upon this subject must be passed by all students before receiving certificates or diplomas.

## THEORY

The study of theory is conducted by Mr. Peterson. This study includes the principles of acoustics and formation of sound, together with a study of analysis of musical forms; simple songs, forms, arias, ballads, and other vocal forms;



the more simple forms of dance music, leading to the higher forms of the sonatina and sonata, canon, fugue, etc.

This study is also required of all students receiving certificates or diplomas.

### EAR TRAINING

A special class in ear training and sight reading is to be included in the course for the coming year, to be conducted by a capable and experienced teacher. This study will be required of all music students.

### EXPENSES OF STUDENTS

The tuition for regular work throughout the year is listed in the table of fees below and depends upon the instructor, subjects studied, etc.

The terms and prices to the student of the five months' course in Agriculture will be the same as that for the regular semester, as given below.

### FEEES

The following fees will be charged a semester for instruction:

#### Prof. Hedge

##### Voice—

Two half hour lessons per week, major work .....	\$32.00
One half hour lesson per week, minor work .....	18.00

#### Mr. Christensen.

##### Violin, Viola, Cello and Band Instruments—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work .....	17.00

#### Mr. Peterson.

##### Piano—

Two half hour lessons per week, major work .....	\$28.00
One half hour lesson per week, minor work .....	17.00

#### Miss Burrows and Mr. Cook.

##### Piano, Pipe Organ, and Violin—

Two half hour lessons per week, major work .....	\$26.00
One half hour lesson per week, minor work .....	15.00

Harmony, history, theory, ear training, sight reading, etc., in classes, free to all students taking major work in voice, piano or violin.

Private lessons in harmony may be obtained for the additional fee of \$10.00 a semester. Students desiring private lessons in har-

mony and studying in more than one department, for example, both voice and piano departments, will be given a discount of \$5.00 a semester to cover the free theoretical work to which they are entitled in each of these departments.

Practice pianos may be used at the following rates a semester:

One hour a day, \$4.00.

Two hours a day, \$7.00.

Three hours a day, \$9.50.

Four hours a day, \$12.00.

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## ART

**Professor Caldwell; Assistant Professor Goddard.**

The aim in arranging the subjects in this department has been to offer such work as will correlate with other college courses in becoming a means to a general education.

The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs and with such tools as are necessary for class work.

Two courses of study are offered, the preliminary work in each being the same. One course includes the study of form and color, and the other principles of design and their application to various crafts. A certificate is given students who satisfactorily complete either course. The time necessary to secure a certificate depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course. The course in academic drawing and painting includes drawing from cast and still life, painting and art history, (courses 6, 7, 8, 9, 10, 11, 12, 13). The course in applied design includes a year of drawing, two years of design and handicraft with a year of art history, (courses 4, 5, 6, 7, 8, 9).

Any advanced student wishing to study the technique of pen and ink will be given individual instruction in that subject.

For Art 1 and 2 see the preparatory department.

3. **Theory of Design.**—One credit; second semester. This subject treats of the principles of design and their practical application in the home.

4-5. **Applied Design.**—Two credits each semester. Four periods a week for the working out of designs in the various crafts of basketry, leather tooling, metalry, jewelry, stenciling and bobbin lace. Students wishing a certificate are required to continue the study of design for a second year and study the principles of the crafts they have not included in their first year's study of applied design.

6. **Art History.**—Two credits; first semester. This course aims to acquaint the student with the styles of historic architecture and with prominent buildings illustrative of each style.

7. **Art History.**—Two credits; second semester. A study of great schools of painting. Reference books in the general library and a collection of photographs in the department furnish material for this course.

8. **Charcoal Drawing.**—Two credits; first semester; elective to students pursuing special work in art. Drawing from simple casts in outline and in light and shade.

10. **Charcoal Drawing.**—Two credits; first or second semester; elective to students pursuing special work in art. Drawing of heads and figures in full light and shade from casts, sketching from pose; prerequisite, Art 8.

11. **Study of Values.**—Two credits; first or second semester; elective to students pursuing special work in art. Value studies in charcoal from still life as preparatory work for painting; prerequisite, Art 1-2.

12-13. **Painting.**—Two credits each semester; elective to students pursuing special work in art; prerequisite, Art 8. Study of color and technic of painting in oil, pastel, and water color from still life and flowers.

14-15. **Drawing.**—Two credits each semester. This course will include object and nature drawing with pencil and colored crayon, for the study of proportion, perspective, light and shade, and pencil technic, thus enabling the student to express the appearance of objects.

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## DEPARTMENT OF MILITARY TACTICS AND SCIENCE

Colonel Lassiter, Commandant

The work of this department is conducted in accordance with War Department Orders promulgated pursuant to Act of Congress, approved June 3, 1916.

Under this Act of Congress military instruction at schools, colleges and universities has taken on an added significance. This work has been made an integral part of the National military policy.

All students taking military training at the various educational institutions throughout the United States are organized into Reserve Officers Training Corps (R. O. T. C.), which are composed of Senior and Junior Units. These units are established by the President of the United States and each consists of not less than 100 physically fit male students, not less than 16 years of age.

South Dakota State College, having fulfilled all requirements of the law, has had established thereat one Senior Unit, (Infantry), of the Reserve Officers Training Corps.

The primary object of establishing units of the Reserve Officers Training Corps is to qualify, by systematic and standard methods of training, students at civil educational institutions for Reserve Officers. The system of instruction prescribed presents to students a standardized measure of that military training which is necessary in order to prepare them to perform intelligently the duties of commissioned officers in the military forces of the United States, and it enables them to be thus trained with the least practical interference with their civil careers.

All men students below the junior year are required to take military training—an equivalent of three hours per week during the academic year, for which one credit each semester is given. This work is a prerequisite for graduation.

The Federal Government gives to each member of the Reserve Officers Training Corps commutation of uniforms, and also issues the latest model arms, equipment, animals and means of transportation, in so far as the supply and appropriations permit.

It is the desire of the War Department to have as many students as possible continue the military instruction throughout the entire four years of their academic course. Hence to all juniors and seniors, who desire to continue the work, who will agree in writing to continue the work until graduation, to take five hours a week, and to participate in two camps of instruction, the Federal government will pay commutation of subsistence at the rate of about 30 cents per day or approximately \$9.00 per month to each such student during his junior and senior years.



Having completed the four years' course in military training and participated in at least two camps of instruction, such students are then eligible to be commissioned in the Officers Reserve Corps, and, if they so desire, for appointment as temporary Second Lieutenants in the Regular Army for a period of six months, with pay of \$100.00 per month and other allowances of that grade.

The Officers Reserve Corps is composed of citizens of the United States who have had military training and who, upon examination, shall be found physically, mentally, and morally qualified. The President alone is authorized to commission such men as Reserve Officers in all grades up to and including that of Major.

The purpose of this Officers Reserve Corps is to secure a reserve of officers available for service as temporary officers in the Regular Army, as officers of the Quartermaster Corps and other staff corps and departments, as officers of recruiting rendezvous and depots, and as officers of volunteers.

Reserve officers must agree to serve as such for ten years. They are not subject to call for service in time of peace except, that, for purposes of instruction, they may be called upon for service with troops or at field exercises for periods not to exceed 15 days in any one calendar year, and while so serving they shall receive the pay and allowances of an officer of the same grade in the Regular Army. Reserve officers are subject to call for duty in times of threatened or actual hostilities, and while so serving they shall receive the pay and allowances of an officer of the same grade in the Regular Army.

Military training during one's college course should be looked forward to with pleasure and not with dread. It can be made to produce individual benefit of lasting value. Any young man who has instilled in him the principles of teamwork, subordination and discipline, is far better equipped to meet the problems of every day life than he is without them. Everyone who is fit to be a citizen of a free country ought to be willing to serve the country when needed and hence every young man should welcome an opportunity to learn something of military training during his college course.



The following courses of instruction in Military Science and Tactics have been prescribed in orders from the War Department for Infantry Units of the Senior Division:

**Freshman Year.**

**1. Military Art.—Three hours a week (counting 14 units.)**

(a) **Practical.**—Weight 10. Physical drill (Manual of Physical Training—Koehler); infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction, sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) **Theoretical.**—Weight 4. Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

**2. Military Art.—Three hours a week (counting 14 units.)**

(a) **Practical.**—Weight 10. Physical drill (Manual of Physical Training—Koehler); infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); bayonet combat; intrenchments (584-595 Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) **Theoretical.**—Weight 4. Lectures, general military policy as shown by military history of the United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations to include School of the Company; camp sanitation for small commands.

**Sophomore Year.**

**3. Military Art.—Three hours a week (counting 14 units.)**

(a) **Practical.**—Weight 10. The same as course 2 (a). Combat firing, if practicable, but collective firing should be attempted indoor ranges by devices now in vogue at United States Disciplinary Barracks.

(b) **Theoretical.**—Weight 4. United States Infantry Drill Regulations, to include School of Battalion and Combat (350-362); Small Arms Firing Regulations; lectures as in (b) course 2; map reading; camp sanitation and camping expedients.

**4. Military Art.—Three hours a week (counting 14 units.)**

(a) **Practical.**—Weight 10. The same as course 2 (a), signaling; semaphore and flag; first-aid; work with sand table by constructing to scale intrenchments, field works, obstacles, bridges, etc. Com-

parison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) **Theoretical.**—Weight 4. Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages, and camp expedients); marches and camp (Field Service Regulations and Infantry drill regulations.)

#### Junior Year.

5. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Duties consistent with rank as cadet officers or non-commissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching.

(b) **Theoretical.**—Weight 11. Minor tactics; field orders (studies in minor tactics, United States School of the Line); map maneuvers. Weight 8. Company administration, general principles (papers and returns.) Weight 1. Military history. Weight 2.

6. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Same as (a) course 5. Military sketching.

(b) **Theoretical.**—Weight 11. Minor tactics (continued); map maneuvers. Weight 8. Elements of International Law. Weight 2. Property accountability; method of obtaining supplies and equipment (Army Regulations.) Weight 1.

#### Senior Year.

7. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Duties consistent with the rank as cadet officers or non-commissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) **Theoretical.**—Weight 11. Tactical problems, small forces, all arms combined; map maneuvers; court martial proceedings (Manual for Courts Martial) international relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation and treaties. Lectures: Psychology of war and kindred subjects. General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed five lectures.)

8. **Military Art.**—Five hours a week (counting 24 units.)

(a) **Practical.**—Weight 13. Same as course 7 (a).

(b) **Theoretical.**—Weight 11. Tactical problems (continued); map maneuvers. Rifle in war. Lectures on military history and policy.

It is presumed that each member of the Reserve Officers Training Corps during his academic course has taken one course or equivalent credit in either French, or German, or Spanish.

## DEPARTMENT OF COMMERCE

Professor Schlatter; Miss Slocum

The department of commerce offers:

(1) The Secretarial course for students who have completed a high school course. The object is to train high grade stenographers and secretaries, the demand for which greatly exceeds the supply. Many Civil Service examinations are held in Brookings, and students who desire to take them are encouraged to do so and are given all the preparation possible.

The courses are so arranged that students are given considerable actual office practice during the second semester just before completing the course. The idea is to train the student for immediate service in office work, and to minimize the customary bungling of the beginner.

Those who complete the year's course as outlined below receive a Secretarial Certificate.

### The Secretarial Course

#### First Semester

	Credits
English, English 9 .....	3
Shorthand, Commerce 5 .....	5
Typewriting, Commerce 6 .....	5
Money & Banking, Commerce 10 .....	3
or	
Economic Geography, Commerce 13 .....	3
Business Principles, Commerce 12 .....	2
or	
Bookkeeping, Commerce 3 .....	

#### Second Semester

English, English 10 .....	3
Shorthand, Commerce 7 .....	5

Typewriting, Commerce 8 .....	3
Secretary Practice, Commerce 14 .....	
Business Law, Commerce 3 .....	3

(2) Elective for students in other departments of the college and in the preparatory department who wish to secure some business training along with their regular work.

### The Commercial Subjects

The following subjects are offered in the department of commerce. At the end of the description of each subject is stated whether the subject is offered to college or to preparatory students:

1. **Business Methods and Penmanship.**—Three credits; first semester. A practical course designed to teach the student to write creditable business forms, and to give him an elementary knowledge of practical business methods. Offered to preparatory students.

2. **Commercial Geography.**—Three credits; second semester. Study of industry and commerce, local, national, and international. This course will be illustrated by the use of a commercial museum now being collected. The student will be required to learn the use of government reports and other sources of information in collecting data. Offered to preparatory students.

3. **Bookkeeping.**—Five credits; first semester. Double entry studied as in actual business; the aim being to acquaint the student with the fundamental principles of bookkeeping. Offered to preparatory students.

4. **Bookkeeping.**—Three credits; second semester. Advanced bookkeeping, affording practice with the more complex books and forms used in modern offices. By the use of separate price lists, each student will be obliged to do independent study and thinking. In this course the student becomes familiar with the uses of various kinds of commercial paper and office practice. Offered to preparatory students.

5. **Shorthand.**—Five credits; first semester. In this course the student masters the theory of shorthand; dictation of simple business letters to develop facility in handling writing material; drills on principles, characters and word-signs. Gregg shorthand is taught. Nothing but the very best work is accepted, for it is time wasted to prepare second and third rate stenographers for office work. Offered to college and preparatory students.

6-8. **Typewriting.**—Two credits each semester. Graded exercises to learn machine by touch method; care of machine; correspondence and legal forms; manifolding and mimeographing; billing and tabulating. College and preparatory students.



7. **Shorthand.**—Five credits; second semester. Dictation of business letters and general matter to develop speed; legal forms; civil service matter. The student is not allowed to develop speed carelessly at the expense of legibility. With this course, the student makes a study of commercial correspondence and the most approved forms in letter composition. All dictated matter is transcribed on the typewriter. College and preparatory students.

9. **Business Law.**—Three credits; second semester; three recitations a week. Designed to acquaint the student with the fundamental principles of business law, supplemented with a study of actual cases illustrative of these principles. A topical analysis of contracts; negotiable paper; agency; sale of chattels; bailment. Offered to college students.

10. **Money and Banking.**—Three credits; first semester. Alternates with Commerce 13. A theoretical and practical study of the history of money; nature and uses of money; classification of banks; bank circulation; deposits and loans; collection; reserves; legal regulations; clearing houses; loan and trust companies. Offered to college students.

11. **General Accounting.**—Two credits; second semester. It is the purpose of this course to acquaint the student with the different forms of industrial organizations, and the nature and analysis of their business transactions. The theory of the exchange of values and that of debits and credits are studied. Attention is given to the correct classification of business interests into their proper accounts with special reference to their relations in the different kinds of statements. Offered to college students.

12. **Business Principles.**—Two credits; first semester. Business principles, organization and methods are discussed in untechnical language, in such a manner as to make the work profitable to the general student as well as to the student of business. Topics discussed are: economic basis of business; types of business organization; interior organization; principles of management; the entrepreneur; and efficient business methods. Offered to college students.

13. **Economic Geography.**—Three credits; first semester; alternates with Money and Banking; will be given in 1918-19. A practical study of the geography of production. The following topics are studied as thoroly as possible in the limited time given to this subject: Regions of production and consumption of grains; fruits; sugar; tea; coffee and cocoa; cotton; wool; beef and dairy products; swine; fisheries; forests; coal; petroleum; iron and steel. Also some time is given to the study of manufacturing industries, origin and basis of trade, ocean and land trade routes, commercial centers, and types of commercial nations. This subject is especially desirable to those students who expect some time to be able to judge trade and market conditions intelligently. Offered to college students.



14. **Secretary Practice.**—Five credits; second semester. After-noon practice with college offices or business firms in town. Also a great deal of practice in taking letters, etc., and transcribing them on the typewriter is given in the class room. The practice will be of great value in giving preliminary experience, and will remove the fear of entering the first regular office work upon graduation. Offered to college and preparatory students.

## PREPARATORY DEPARTMENT

Professor Forsee

For the benefit of students who do not have high school advantages a preparatory department is maintained. This course, the work of which extends over four years, contains certain required subjects that are considered necessary to a liberal education. The remaining work may be chosen from a large list of elective subjects. The student who pursues the course may thus secure a good preparation for entering upon more advanced work or a training for practical life.

The course conforms to the admission requirements as far as the conditions in the College permit. Students will be admitted to the college courses upon the completion of the required subjects and an additional amount of work chosen from the elective subjects to make fifteen units, a unit being five hours a week throughout the year. This requires about three hours of elective work a week in addition to the required subjects during the four years. In addition to the requirements outlined below, all students will be required to attend and take part in literary society work, for which they will receive reasonable credit.

### PREPARATORY COURSE

#### First Year

##### First Semester—

Credits

English Composition. English 1 .....	5
Arithmetic (including Metric System), Mathematics 1.....	5
Physiography .....	5
Business Methods, Commerce 1 .....	
or	
Freehand Drawing, Art 1 .....	3
Military Tactics .....	1
Elective .....	3

## Credits

## Second Semester—

English Composition, English 2 .....	5
Beg. Algebra, Mathematics 2 .....	5
Civics, History 1 .....	4
Commerce and Industry, Commerce 2 .....	
or	
Freehand Drawing, Art 2 .....	3
Military Tactics .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

## Second Year

## First Semester—

English Composition and Rhetoric, English 3 .....	5
Algebra, Mathematics 3 .....	5
Elementary Biology, Entomology 1 .....	5
Military Tactics .....	1
Elective .....	3

## Second Semester—

English Composition and Rhetoric, English 4 .....	5
Algebra, Mathematics 4 .....	5
Elementary Biology, Entomology 2 .....	5
Military Tactics .....	1
Elective .....	3
For list of preparatory electives, see the following pages.	

## Third Year

## First Semester—

American Literature, English 5 .....	4
Plane Geometry, Mathematics 5 .....	4
French or Spanish, Pr. 1 .....	5
*Greek History, History 3 .....	3
Military Tactics .....	1
Elective .....	3

## Second Semester—

American Literature, English 6 .....	4
Plane Geometry, Mathematics 6 .....	4
French or Spanish, Pr. 2 .....	5
Roman History, History 4 .....	3
Military Tactics .....	1
Elective .....	3

For list of preparatory electives, see the following pages.

## Credits

## Fourth Year

## First Semester—

English Literature, English 7 .....	3
Elementary Physics, Physics 1 .....	5
French or Spanish, Pr. 3 .....	5
American History, History 5 .....	3
Military Tactics .....	1
Elective .....	3

## Second Semester—

English Literature, English 8 .....	3
Elementary Physics, Physics 2 .....	5
French or Spanish, Pr. 4 .....	5
American History, History 6 .....	3
Military Tactics .....	1
Elective .....	1

For list of preparatory electives, see the following pages.

\*Students taking Shorthand will be allowed to substitute type-writing for Greek History and Roman History, or for English History.

## PREPARATORY ELECTIVES

## First and Second Years

## First Semester—

Freehand Drawing, Art 1 .....	3
Carpentry, Mechanical Engineering 1 .....	3
Elementary Agriculture, Agriculture 1 .....	3
Cooking, Home Economics 1 .....	3
Bookkeeping, Commerce 4 .....	5
Business Methods, Commerce 1 .....	3
Typewriting, Commerce 6 .....	2

## Second Semester—

Freehand Drawing, Art 2 .....	3
Forging, Mechanical Engineering 2 .....	3
Elementary Agriculture, Agriculture 2 .....	3
Sewing, Home Economics 2 .....	3
Bookkeeping, Commerce 4 .....	3
Typewriting, Commerce 8 .....	2
Commerce and Industry, Commerce 2 .....	3

## Third and Fourth Years

## First Semester—

Freehand Drawing, Art 1 .....	3
Cooking, Home Economics 2 .....	3
Carpentry, Mechanical Engineering 1 .....	3
*Shorthand, Commerce 5 .....	5

	Credits
Elementary Agriculture, Agriculture 1 .....	3
Typewriting, Commerce 6 .....	2
Elementary Physiology, Zoology 1 .....	5
Mechanical Drawing, Mechanical Engineering 5 .....	3
Bookkeeping, Commerce 3 .....	3
Solid Geometry, Mathematics 7 .....	3
<b>Second Semester—</b>	
Freehand Drawing, Art 2 .....	3
Sewing, Home Economics 1 .....	3
Bookkeeping, Commerce 4 .....	3
Forging, Mechanical Engineering 2 .....	3
Mechanical Drawing, Mechanical Engineering 5 .....	3
Typewriting, Commerce 8 .....	2
*Shorthand, Commerce 7 .....	5
Elementary Agriculture, Agriculture 2 .....	3
Elementary Physiology, Zoology 2 .....	3

\*Students taking Shorthand will be allowed to substitute type-writing for Greek History and Roman History, or for English History.

## SCHOOL OF AGRICULTURE

### Professor Stivers

The School of Agriculture has for its specific purpose the training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farm and in the homes to help the parents during the busy season of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

While the subjects of study consist primarily of those that relate to farming and household economy, they include also such subjects as are usually given in a regular high school course. For example, English, mathematics, history, civics, chemistry, physics and biology. The technical topics include studies in soil, plants and crops, domestic animals, feeds and feeding, cooking and sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text books are used when these aids best answer the purpose.

Lectures are given in the subjects which can be most efficiently taught in this way. Demonstrations are given in the classrooms, laboratories, kitchen and sewing-rooms, barns, greenhouses, orchards and fields.

The School of Agriculture welcomes earnest and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

The tuition is six dollars for the year, with a small fee for each laboratory in which work is taken.

### COURSES OF STUDY

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work.

#### THE FOUR-YEARS COURSE FOR YOUNG MEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of times a week, "a" meaning class work; "b" laboratory work.

##### First Year

Penmanship and Spelling .....	a	2
English .....	a	4
Arithmetic or Algebra .....	a	4
Poultry Culture .....	a	2
Farm Crops .....	a	3, b 2
Stock Judging .....	b	2
Horticulture .....	b	1
Carpentry .....	b	3
General Science .....	a	2
Military Drill .....		3

##### Second Year

English .....	a	4
Algebra or Advanced Arithmetic .....	a	4
Farm Accounts .....	b	1
Plant and Animal Life .....	a	5
Dairying .....	a	1, b 2
Breeds and Breeding .....	a	2, b 1
Horticulture .....	b	1



Blacksmithing .....	b	3
Military Drill .....		3

### Third Year

English .....	a	4
Plane Geometry, Algebra or Advanced Blacksmithing .....	a	4
Civics .....	a	3
Elementary Chemistry .....	a and b	4
Farm Machinery .....	a	2
Entomology .....	a 1, b	1
Stock Feeding .....	a	5
Military Drill .....		3

### Fourth Year

English .....	a	4
History .....	a	3
Co-operation .....	a	1
Geometry or Elementary Farm Management .....	a	4
Elementary Physics .....	a 2, b	2
Physiology .....	a	2
Cement Construction .....	b	2
Veterinary Science .....	a	3
Soils .....	b	3
Bee Keeping (Elective) .....	a	2
Military Drill .....		3

## THE FOUR-YEARS COURSE FOR YOUNG WOMEN

### First Year

Penmanship and Spelling .....	a	2
English .....	a	4
Arithmetic or Algebra .....	a	4
Craft .....	b	2
Poultry Culture .....	a	2
Cooking I .....	b	3
Sewing I .....	b	3
Dairying .....	b	1
Horticulture .....	b	1
General Science .....	a	2
Art Needlework (Elective) .....	b	1
Physical Training .....		2

### Second Year

English .....	a	4
Algebra or Arithmetic .....	a	4
Household Accounts .....	b	1
Plant and Animal Life .....	a 3, b	2
Cooking II .....	b	3

Sewing II .....	b 3
Household Management .....	a 1
Art Needlework (Elective) .....	b 1
Freehand Drawing .....	b 1
Physical Training .....	2

### Third Year

English .....	a 4
Plane Geometry or Algebra, or Rural School Domestic Science ....	a 4
Civics .....	a 3
Elementary Chemistry .....	a and b 4
Sewing III .....	b 2
Cooking III .....	b 2
The House .....	a 2
Craft .....	b 1
Art Needlework (Elective) .....	b 1
Physical Training .....	2

### Fourth Year

English .....	a 4
History .....	a 3
Co-operation .....	a 1
Geometry .....	a 4
Elementary Physics .....	a 2, b 2
Physiology .....	a 2
Sewing IV .....	b 2
Cooking IV .....	b 2
Home Nursing .....	a 2
Millinery .....	b 1
Art Needlework (Elective) .....	b 1
Physical Training .....	2

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## THE SUMMER SCHOOL

### Professor Stivers, Director

The work of the Summer Session is planned especially for those who desire training along the industrial lines—Agriculture, Manual Training, Home Economics and allied subjects, either to secure college credits or to prepare for teaching.

The vocational field offers excellent opportunity to teachers. Salaries in this line of work are especially good and the demand for teachers exceeds the supply.

State College with her laboratories, shops, experimental plots and live stock offers many advantages to students who desire to fit themselves to teach vocational subjects.

In addition to members of the regular College staff a number of special instructors and lecturers are employed during the session.

The Summer Session for 1918 will begin June 10th and continue six weeks. The following courses will be offered:

**Agriculture.**—Animal Husbandry, Breeding Livestock, Stock Judging, Livestock Management, Farm Dairying, Soils and Crops.

**Home Economics.**—Cookery, Sewing, Dressmaking, Millinery, Serving, Handwork, Basketry, Etc.

**Mechanical.**—Woodworking, Joinery and Cabinet Construction, Finishing, Forging, Tractor Operation, Gas Engine Ignition, War Telegraphy, Mechanical Drawing, and special courses for rural school teachers.

**General Sciences.**—Elementary Inorganic Chemistry; Elements of Physics; Civics and Rural Social Science (3 courses); English and American Literature (4 courses); Nature Study, Evolution and Sanitation, (3 courses).

**Education.**—Educational Psychology, Principles of Teaching, Vocational Education and Agricultural Education.

**Specials.**—Primary Methods, Grammar, History, Civics, Geography, Stenography (12 weeks) and Red Cross Work.

The 1918 Summer Session will begin June 10th. In connection with the Session a Joint Institute of Miner, Moody, Hamlin, Kingsbury, Codington and Brookings counties will be held, beginning June 10th and closing June 15th. Those wishing detailed information concerning the Summer Session or Joint Institute should write to the President for the Summer School Bulletin.

## Short Industrial Course

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### THE FARM AND HOME COURSE

December 30 to January 4.

This course, which will be given during the Christmas vacation, will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects. Write to the College for further information.

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### THE THREE MONTHS' CREAMERY COURSE

January 6 to March 13

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending College, as by this means it is found that much greater benefit is derived from the work at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demands a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the "reason why" for many of our daily operations. The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at excellent salaries. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered:

Factory buttermaking and creamery management.

Testing milk and its products.

Dairy bacteriology.

Dairy arithmetic and accounting.

Breeding, feeding and management of dairy cattle.

Agronomy.

Veterinary Medicine.

Creamery Mechanics.

The tuition is four dollars for the three months' term with a small additional fee for laboratory expenses.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

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## COURSE IN FARM MECHANICS

\*January 2 —————

Modern agricultural methods have introduced the steam and gas engine, as a substitute for animal power, in such a marked degree, that the consequent growing demand for traction engineers has led the College to arrange a five months' course for the special training of such engineers. Extreme care has been taken to offer only such work as will prove valuable to the man running the traction engine and other machinery. A relatively large amount of shop work and engine practice is introduced.

For the work in engine practice several of the most modern types of both steam and gas traction engines are available. Enough time is devoted to this part of the work to make each student thoroughly familiar with all of the engines, and able to operate them satisfactorily in actual practice. The engine practice work generally starts as soon as the frost is out of the ground, or about April 10th, and continues to the end of the term.

A series of lectures on the gas engine, with particular reference to its application to the tractor and the automobile, is given.

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\*This course continues until the end of the second semester which is ordinarily about June 1. Because of war conditions the course may close earlier than this in 1919.



A proper proportion of recitations in closely allied subjects is also included in this course.

The tuition is eight dollars for the entire course with a small amount extra for laboratory fees.

Upon the satisfactory completion of the work the student is given a certificate which is virtually the same as a license to run an engine in this state.

Students who desire to take this course are expected to pass a satisfactory examination in arithmetic, to read intelligently and to show such general elementary training as will indicate that they are able to understand the subjects embraced in this course.

The work offered is as follows:

	Periods per week
Arithmetic .....	5
Heat Engines and Elementary Physics .....	5
Stock Judging .....	2 ½
Steam and Gas Engine Lectures .....	2 ½
Forging .....	2 ½
Mechanical Drawing .....	2 ½
Steam and Gas Engine Practice .....	2

# Agricultural Experiment Station

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## STATION STAFF

The number after each name indicates the year of appointment to present position on the staff; the second number, if any, indicates the date of first official connection with the college.

**ELLWOOD C. PERISHO, A. M., LL. D., 1914, President of the College.**

B. S., Earlham College, 1887; A. M., 1889; LL. D., 1913; M. S., University of Chicago, 1895.

**JAMES WILBUR WILSON, 1902, Director and Animal Husbandman; Professor of Animal Husbandry, Instructional Division.**

B. S. A., Iowa State College, 1896; M. S. A., 1898.

**NIELS E. HANSEN, 1895, Vice Director and Horticulturist, Professor of Horticulture and Forestry, Instructional Division.**

B. S., Iowa State College, 1887; M. S., 1894; Sc. D., University of South Dakota, 1917.

**R. A. LARSON, Secretary of the College.**

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**MANLEY CHAMPLIN, 1914, 1909, Assistant Agronomist; Assistant Professor of Agronomy in the Instructional Division; Specialist in Field Crops, Extension Division.**

B. S., South Dakota State College, 1909; M. S., 1914.

**ALBERT NASH HUME, 1911, Agronomist and Superintendent of Sub-Stations; Professor of Agronomy in the Instructional Division.**

B. S. A., Purdue University, 1900; M. S., 1902; Ph. D., Goettingen University, 1910.

**JOSEPH GLADDEN HUTTON, 1911, Associate Agronomist; Associate Professor of Agronomy in the Instructional Division; Specialist in Soils, Extension Division.**

B. S., University of Chicago, 1908; M. S., University of Illinois, 1910.

**CHRISTIAN LARSEN, 1907, 1918, Dairy Husbandman; Director of the Extension Division; Professor of Dairy Husbandry in the Instructional Division.**

B. S. A., Iowa State College, 1902; M. S. A., 1904.

**H. C. SEVERIN, 1909, Entomologist; Professor of Entomology and Nature Study in the Instructional Division.**

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908.

**\*JAMES H. SHEPARD, 1888, Chemist; Professor of Chemistry in the Instructional Division.**

B. S., University of Michigan, 1875.

\*Died February 21, 1918.

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**MATTHEW FOWLDS, 1914, 1913, Assistant in Crops; Assistant in Agronomy, Instructional Division.**

B. S., South Dakota State College, 1913.

**EDWIN H. HUNGERFORD, 1914, Dairy Analyst.**

B. S., Kansas State Agricultural College, 1912; M. S., 1914.

**HOWARD LOOMIS, 1910, Agronomy Analyst.**

A. B., Albion College, 1909.

**R. C. SHERWOOD, 1916, 1914, Assistant Chemist; Instructor in Chemistry in the Instructional Division.**

B. S., South Dakota State College, 1914, M. S., 1916.

**THOMAS H. WRIGHT, Jr., 1917, Assistant Dairy Husbandman and Dairy Bacteriologist; Instructor in Dairy Husbandry in the Instructional Division.**

B. S., in Dairying, Iowa State College, 1914.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state receives annually \$30,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of six divisions, namely: agronomy, animal husbandry, dairy, entomology, horticulture and chemistry.

Each of these divisions is in charge of an expert who is also professor of the same subject in the College.

About sixty acres of the college farm are set aside for experiments in crop rotation and testing varieties of grains.

Another tract of sixty acres is utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varie-

ties have been introduced which probably would not otherwise have reached us.

Each division is provided by the state with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to residents of the state. Inquiries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 22,000 names.

All communications to this department should be addressed to the Director.

# Agricultural Extension Division

## EXTENSION STAFF.

Note: The number following the name indicates the year of appointment to present position on the staff. The second number, if any, indicates the date of first connection with the college.

**\*ELLWOOD C. PERISHO, A. M., LL. D., 1914, President of the College.**

**†GORDON W. RANDLETT, B. S. A., 1915, Director of the Extension Division.**

**CHRISTIAN LARSEN, 1918, 1907, Director of Extension Division; Professor of Dairy Husbandry, Instructional Division; Dairy Husbandman, Experiment Station.**  
B. S. A., Iowa State College, 1902; M. S. A., 1904.

**I. B. JOHNSON, 1917, State Leader of County Agents.**  
B. S., Iowa State College, 1913.

**R. A. LARSON, 1901, Secretary of the College.**

**MANLEY CHAMPLIN, 1917, 1911, Extension Specialist in Field Crops; Assistant Professor of Agronomy in the Instructional Division; Assistant Agronomist of the Experiment Station.**  
B. S., South Dakota State College, 1909; M. S., 1914.

**H. E. DAWES, 1916, Assistant Superintendent of Short Courses.**

**J. T. E. DINWOODIE, 1916, Extension Specialist in Animal Disease Control.**  
D. M. V., Vet. College, University of Pennsylvania, 1913.

**J. G. HUTTON, 1916, Specialist in Soils; Associate Professor of Agronomy, Instructional Division; Associate Agronomist, Experiment Station.**  
B. S., University of Chicago, 1908; M. S., University of Illinois, 1910.

**FRANK E. McCALL, 1916, Extension Specialist in Horticulture.**  
B. S., Iowa State College, 1911.

**W. M. MAIR, 1914, State Leader of Boys and Girls Clubs.**

**T. A. MEEHAN, 1915, Extension Specialist in Dairying.**

**A. E. MILLER, 1917, Assistant Farm Management Demonstrator.**  
B. S., South Dakota State College, 1918.

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\*For academic record, see Instructional Staff.

†Resigned April 1, 1918.



**GUY E. MORRISON, 1915, Extension Specialist in Livestock Improvement.**

B. S., South Dakota State College, 1915.

**AGNES MORTON, 1917, Assistant State Leader of Boys and Girls Clubs.**

B. S., University of Minnesota, 1912.

**W. A. OSTRANDER, 1916, 1915, Farm Management Demonstrator.**

B. A., Lawrence College, 1911; M. S., University of Wis., 1914.

**RALPH L. PATTY, 1916, Extension Specialist in Agricultural Engineering.**

B. Di., Iowa Teachers' College, 1907; B. S. in Agricultural Engineering, Iowa State College, 1916.

### COUNTY AGRICULTURAL AGENTS

Name.	Address.	County.
Leon Anderson .....	Philip .....	Haakon
E. C. Bird .....	Armour .....	Douglas
A. J. Dexter .....	Clark .....	Clark
O. P. Drake .....	Huron .....	Beadle
E. W. Hall .....	Redfield .....	Spink
Ralph E. Johnston .....	Hot Springs .....	Fall River
W. F. Kumlien .....	Spearfish .....	Lawrence
Dick Lewallen .....	Presho .....	Lyman
A. W. Palm .....	Watertown .....	Codington
Harry E. Rilling .....	Wessington Springs .....	Jerauld
R. O. Swanson .....	Howard .....	Miner
Vey J. Valentine .....	Ft. Pierre .....	Stanley

### FOOD EMERGENCY SPECIALISTS.

Roscoe C. Pollock, Assistant County Agent Leader.

G. S. Weaver, Inspector in Charge, Hog Cholera Work.

W. C. Boardman, Farm Help Specialist.

Roberta McNeill, State Leader of Home Emergency Demonstration Agents.

Ed L. Hayes, Extension Poultry Husbandman.

W. W. Underwood, Assistant County Agent Leader.

Arthur W. Tompkins, Assistant Emergency Demonstration Leader.

Paul J. Scarbro, Emergency State Club Leader.

Mary A. Dolve, Emergency Home Demonstration Agent.

Mrs. Blanche Johnston, Emergency Home Demonstration Agent.

Laura L. Jones, Emergency Home Demonstration Agent.

Hazel Grinols Palm, Emergency Home Demonstration Agent.

A. L. Haynes, Emergency District Club Leader.  
 Ruth Lynch, County Club Leader.  
 Altha A. Moad, Emergency District Club Leader.  
 May Keithline, Emergency District Club Leader.  
 A. H. Skovlin, Emergency District Club Leader.  
 Homer W. Smith, Emergency District Club Leader.

### COUNTY EMERGENCY DEMONSTRATION AGENTS.

Name.	Address.	County.
E. C. Anderson	Clear Lake	Deuel
O. H. Barnes	Belle Fourche	Butte
I. J. Bibby	Madison	Lake
C. H. Blakely	White River	Mellette
W. M. Brennan	Mitchell	Davison
Roy R. Buchanan	Ipswich	Edmunds
A. L. Bushey	Plankinton	Aurora
L. M. Caldwell	Hayti	Hamlin
P. J. Crandall	Elk Point	Union
G. G. Dokter	Britton	Marshall
P. V. Finley	Brookings	Brookings
Harry Gardner	Rapid City	Pennington
Chas. J. Gilbert	Faulkton	Faulk
John A. Gunning	Webster	Day
J. H. Hamilton	Woonsocket	Sanborn
Oscar Hermstad	Timber Lake	Timber Lake Dist.
Lloyd Holliday	Fairburn	Custer
Glenn Hoon	Kadoka	Jackson
Russell Jensen	Canton	Lincoln
Ira S. Johnson	Chamberlain	Brule
Harvey F. Johnson	Lake Andes	Charles Mix
J. L. Jordan	Sturgis	Meade
Dallas L. Keck	Yankton	Yankton
George B. Kennard	Sioux Falls	Minnehaha
H. C. Lende	Gettysburg	Potter
M. A. Lindsay	Burke	Gregory
George R. Mayland	Alexandria	Hanson
H. D. McCullough	Sisseton	Roberts
N. F. Nelson	Pierre	Hughes
Alfred E. Nord	Mound City	Campbell
Axel Peterson	Onida	Sully
N. C. Risjord	Miller	Hand
H. E. Skott	Vermillion	Clay
Joseph Smith	Tyndall	Bon Homme
Roy E. Smith	Aberdeen	Brown
J. I. Swedberg	Milbank	Grant

Name.	Address.	County.
Chester Tate .....	Lemmon .....	Perkins
Colman Wagner .....	Selby .....	Walworth
H. D. White .....	Faith .....	Faith District
H. B. Wilson .....	Flandreau .....	Moody
George L. Winright ....	Salem .....	McCook

In 1914 Congress passed the Smith-Lever Act, appropriating a considerable sum of money to the various states in which Agricultural Extension work including home economics should be established. The state of South Dakota in its last Legislative Session met the requirements of the Federal Act by appropriating \$55,000 for the present biennial period to be used in Agricultural Extension including county agent work. Activities are carried on under the project plan as follows:

1. Administration.
2. County Agent Work.
3. Short Course Work.
4. Club Work.
5. Home Economics.
6. Creamery Extension Work.
7. Farm Management.
8. Live Stock Improvement.
9. Agricultural Engineering.
10. Horticulture.
11. Animal Disease Control.
12. Agronomy.

Any county in the state may secure the benefits of Federal and State appropriations in the following manner: It shall be lawful for 50 or more freeholders residing in at least one-third of the congressional townships of the county, to organize and incorporate an Agricultural Extension Association. The members of the association shall pay a membership fee of one dollar and shall file articles of incorporation with the Secretary of State, and elect a Board of Directors. The directors may secure an appropriation from the County Board of Commissioners which may be deposited with the Treasurer of State and be augmented from the state funds by 60 per cent of the amount so deposited. The county is then in a position to ask for Federal assistance.

The state law provides for the conducting of demonstration courses in Agriculture and Home Economics in all counties not employing a county agent. This work is under the immediate supervision of the Short Course Superintendent and is conducted during the late fall and winter months. It takes the place of Farmers' Institutes of former years.

Boy and Girl Club Work is carried on usually in co-operation with the County Superintendent of Schools. This work is in charge of a State Club Leader. It consists in the organization of boys and girls between the ages of 10 and 18 years into clubs for the purpose of growing corn, economical pig raising, gardening and canning, bread and garment making, etc.

Practically every county in the state of South Dakota has either a county agent or an emergency demonstration agent. The latter agents are paid by the United States Government and are responsible to the state and government jointly.

The state has been divided into districts and a lady home emergency demonstration agent is employed for each district. This expense also is defrayed by the United States Government.

# College Alumni

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## ALUMNI ASSOCIATION

H. H. Hoy, '96.....	President
H. H. Biggar, '10.....	First Vice-President
Earl Serles, '15.....	Second Vice-President
Colman Wagner, '17.....	Third Vice-President
H. B. Mathews, '92.....	Secretary and Treasurer

(Any succeeding name marked with an \* indicates that the person is in the U. S. military service and that the address which follows is one from which a letter could be forwarded. Almost all are commissioned officers, but as data is not complete no attempt has been made to give official ranks.)

## Class of 1886

### BACHELOR OF SCIENCE

Sayler, Marcus A. ....Fruit Grower, Orland, Cal.

## Class of 1888

### BACHELOR OF SCIENCE

Aldrich, John M.....With U. S. Bureau of Entomology,  
.....316 S. Grant St., West Lafayette, Ind.  
Lawrence, Philip A.....Attorney, Fargo, N. D.  
Wellman, Lulah (Hewes).....Lakewood, N. Y.

## Class of 1889

### BACHELOR OF SCIENCE

Boswell, Katie (Arnold) .....Kennebec  
Cranston, Mary (Crane).....04303 Lincoln St., Spokane, Wash.  
Cross, Alvah G.....  
Eno, Durell G.....Merchant, Platte  
Grady, Francis A.....Attorney, Crookston, Minn.  
Haber, Sarah (Cunningham).....E. 804 26th Ave., Spokane, Wash.  
Korstad, Hans.....Rural Mail Carrier, Brookings  
Larson, Lars K. ....Banker, Dell Rapids  
Lawshe, Grace (Brooke) Bookkeeper.....  
.....710 Marshall Ave., St. Paul, Minn.  
McKenney, Duston W.....Supervisor Manual Training,  
.....302 Lewis Ave., Billings, Mont.  
McLouth, Lewis C.....Gen. Mgr. Miniature Sales Co.,  
.....1228 Chamber Co., Detroit, Mich.



Mork, Albert A.....Farmer, Drady, N. D.  
 Roe, Ellen (Aldrich).....Died Dec. 8th, 1897, at Helena, Mont.  
 Rogers, Edmund.....Machinist, 104 Eleventh St., Milwaukee, Wis.  
 Ross, Carrie (Orcutt).....Webb, Ia.  
 Ross, Abbie (Wesche).....Webb, Ia.  
 Wardall, Anna (Scott)...Osteopath, 2640 Walnut Ave., Seattle, Wash.

#### Class of 1890

#### BACHELOR OF SCIENCE

Allen, William C.....Died in Chicago  
 Day, John M.....Farmer, Topsy, Fla.  
 Duffey, Maggie (Irish).....7139 Lanham St., St. Louis, Mo.  
 Egeburg, Hildus.....Farmer, Brookings  
 Haasarud, Ole H.....Farmer, Bratsburg, Minn.  
 Harkins, Lilla A., Prof. of Domestic Science.....  
 .....Montana Agricultural College, Bozeman  
 Hopkins, Cyril G., Prof. of Agronomy, Chemist and Vice Director  
 of Exp. Station, U. of Illinois, 1001 S. Wright St., Champaign  
 Jenkins, John C.....Attorney, 1102 Spaulding Bldg., Portland, Ore  
 Kenyon, Arthur H.....Lawyer, 1315 Mallon Ave., Spokane, Wash.  
 Pyne, Estel W.....Capitalist, 633 S. Union Ave., Los Angeles, Cal.  
 Roe, Guy W.....1435 Alvarado Terrace, Los Angeles, Cal.  
 Stoner, Minna A.....Home Economics Lecturer, Woonsocket  
 Wardall, Norman M.....Co. Auditor, Kings Co., Seattle, Wash.

#### Class of 1891

#### MASTER OF SCIENCE

Aldrich John M., With U. S. Bureau of Entomology.....  
 .....316 S. Grant St., West Lafayette, Ind.

#### BACHELOR OF SCIENCE

Aldrich, Irwin D....Editor and Sec. State Board of Regents, Big Stone  
 Bell, William D.....  
 .....Mgr. Am. Motorists Ass'n, Upham Bldg., St. Paul, Minn.  
 \*Bentley, Wm. S.....Physician, Rapid City  
 Chamberlain, Jennie (Spooner) .....  
 .....Physician, 813 4th Ave., Detroit, Mich.  
 Crane, Austin B., Prof. of Math. and Civil Eng., Spokane Univ.,  
 .....04303 Lincoln St., Spokane, Wash.  
 \*Davis, Homer.....Physician, Genoa, Neb.  
 Dillon, Willis C.....  
 Doughty, Hettie (Dibble).....Alpena  
 Frick, Mary (Magaw).....903 W. Zumbro St., Rochester, Minn.  
 Hann, Jay B.....Photographer, Bellingham, Wash.  
 Houston, Grant.....Physician, Barber Bldg., Joliet, Ill.  
 Irish, Henry C.....Horticulturist, 7139 Lanham St., St. Louis, Mo.

Lewis, Perry.....Inventor, 101 E. Cherry St., Mankato, Minn.  
 Robinson, Alice (Heberlein)...1710 Arlington Ave., Los Angeles, Cal.  
 Shannon, Fanny (Fourt).....804 E. Burlington St., Fairfield, Iowa  
 Solberg, Halvor C.....Prof. Steam and Mechanical Eng., S. D. S. C.  
 Updyke, Nora (Bacon).....2211 Elizabeth St., Pueblo, Colo.  
 Valleau, Vinal B. ....Moving Picture Theaters, Albert Lea, Minn.  
 West, Hugh H. ....Physician, Spurling Bldg., Elgin, Ill.  
 Wolgemuth, Lee E..Research Eng., 532 S. Ridgeland Ave, Chicago, Ill.

### Class of 1892

#### BACHELOR OF SCIENCE

Austin, Steven E.....Mechanical Engineer, Chicago  
 Davis, Samuel H.....Farmer, Beaverton, Ore.  
 Griffiths, David, Asst. Agronomist.....  
                   .....Dept. of Agriculture, Tacoma Park, Washington, D. C.  
 Hamlin, John R. Jr., Orange Grower, R. F. D. No. 6, Los Angeles, Cal.  
 Harding, Albert S....Prof. of History & Political Science, S. D. S. C.  
 Hatfield, Ira A.....Died Feb. 8th, 1914, at Lincoln, Neb.  
 Keeney, Emma (Ferris).....Springfield, Ore.  
 McAndrew, James E....Lawyer, 906 Paulsen Bldg., Spokane, Wash.  
 McLouth, Ida B.....Died Aug. 27, 1899, at Short Beach, Conn.  
 Madden, Marguerite (Akin) .....Brookings  
 Mathews, Hubert B.....Prof. of Physics, S. D. S. C.  
 Plocker, Eva (Mathews) .....Brookings  
 Schlosser, Thomas F.....Clergyman, Carleton, Ore.  
 Sloan, Nettie (Torrence).....29 Kendall St., Redlands, Cal.  
 Snell, Effie (Clark)..400 E. 14th St., University Place, Lincoln, Neb.  
 Whitten, John C.....Prof. of Hort., U. of Missouri, Columbia  
 \*Winegar, Albert J.....Box 425, Beloit, Wis.

### Class of 1893

#### MASTER OF SCIENCE

Griffiths, David, Asst. Agronomist.....  
                   .....Dept. of Agriculture, Tacoma Park, Washington, D. C.

#### BACHELOR OF SCIENCE

Bates, Edmund T.....Farmer, Wyoming, Iowa  
 Beck, Milton.....Engineer, Dusenber Motor Co., Elizabeth, N. J.  
 Edgerton, Wm. M.....Physician, 2102 Dayton Ave., St. Paul, Minn.  
 McLouth, Benjamin F., Ins. Agent.....  
                   .....L. A. Investment Bldg., Los Angeles, Cal.  
 Robertson, Ada N.....Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec.  
                   for Russia, Care Y. M. C. A., 124 E. 28th St., New York, N. Y.  
 Schoppe, W. J. A.....Farmer, Groton

**Class of 1894****MASTER OF SCIENCE**

Plocker, Eva (Mathews) .....Brookings  
 Wolgemuth, Lee E..Research Eng., 532 S. Ridgeland Ave, Chicago, Ill.

**BACHELOR OF SCIENCE**

Brown, Cyrus O.....Attorney, Douglas, Wyo.  
 Brown, James A.....Attorney, Burlington Block, Lincoln, Neb.  
 Dibble, Hattie (Stow) ....Instr. Home Economics, Grandview, Wash.  
 Hopkins, Mrs. C. G.....1001 S. Wright St., Champaign, Ill.  
 Luke, Fred K. ....Farmer, R. F. D. No. 2, Kalispell, Mont.  
 Parker, Fannie (Spooner).....Brookings  
 Sproul, Alex H., Director Com. Dept., High School of Commerce..  
 .....Portland, Ore.  
 Tanzy, Marvin F.....Died Feb. 8, 1900, at Canton, S. D.  
 Waters, Geo. D.....Mgr. Gas Co., Parsons, Kans.  
 Williams, Elinor (Knox).....Phoenix, Arizona  
 Young, Gilbert A., Prof. of Mech. Eng., Purdue Univ.....  
 .....739 Owen St., Lafayette, Ind.

**Class of 1895****MASTER OF SCIENCE**

McKenney, Duston W., Supervisor Manual Training.....  
 .....302 Lewis Ave., Billings, Mont.  
 Schoppe, W. J. A.....Farmer, Groton  
 Sproul, Alex H., Director Com. Dept., High School of Commerce..  
 .....584 E. 13th St. N., Portland, Ore.

**BACHELOR OF SCIENCE**

\*Allison, Wm. F. ....Prof. of Civil Eng., U. of Wash., Seattle, Wash.  
 Brown, Sarah .....Shannon City, Iowa  
 Cornell, Harry M. ....Real Estate, Mott, N. D.  
 Mayland, Mabel (Merrick).....Troy, Kan.  
 Parker, Anna (Moore) .....Brookings  
 Salisbury, Edith (Robertson) Care Y. M. C. A., 124 E. 28th St.,  
 .....New York, N. Y.  
 Sevy, Isaac B. ....Teacher, Freewater, Ore.  
 Sproul, Wm. C., Sec'y Ingersoll Milling Machine Co. ....  
 .....1751 Clinton St., Rockford, Ill.  
 Thornber, John J.....Prof. of Botany, U. of Arizona, Tucson  
 Wilcox, Ernest N.....Farmer, Thawville, Ill.

**PHARMACY GRADUATES**

Briggs, Elmer E.....Farmer, Muscoda, Wis.  
 Knox, Wm. H.....With U. S. Dept. of Agr., Phoenix, Ariz.  
 Lentz, Elmer A.....Dentist, Brookings  
 Murphy, Wm.....Died July 5, 1896, at Brookings  
 Whitehead, B. T. ....Died April 1, 1917, at Brookings

## Class of 1896

## MASTER OF SCIENCE

Brown, James A. .... Attorney, Burlington Block, Lincoln, Neb.  
 Luke, Fred K. .... Farmer, R. F. D. No. 2, Kalispell, Mont.  
 Robertson, Ada N. .... Teacher, R. F. D. No. 225, Anaheim, Cal.  
 Snell, Effie (Clark) .. 400 E. 14th St., University Place, Lincoln, Neb.  
 Wilcox, Ernest N. .... Farmer, Thawville, Ill.

## BACHELOR OF SCIENCE

Atkinson, Jesse C. .... Farmer, Allegan, Mich.  
 Carter, Louis W. .... Register of Deeds, Highmore  
 Dibble, Ida (Brown) .... Burlington Block, Lincoln Neb.  
 Downing, Jennie C. .... Tel. Mgr., Rathdrum, Idaho  
 Grattan, Paul H. .... Hardware, Chatfield, Minn.  
 \*Hegeman, Harry A. .... Pendleton, Ore.  
 Holm, Andrew B. .... Farmer, Brookings  
 Hoy, Howard H. .... Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.  
 Korstad, Mary .... Brookings  
 Lusk, Willard C. .... Editor Yankton Press and Dakotan, Yankton  
 Mathews, Alta (Smith) .... Klamath Falls, Ore.  
 Mathews, Nora (Hoy) .... Brookings  
 Sasse, Ernest G. .... Physician, Lidgerwood, N. D.  
 Williamson, Albert. .... Attorney, Kennebec

## PHARMACY GRADUATES

Cotter, J. C. .... Merchant, Dell Rapids  
 Grove, Eugene. .... Physician, Arlington, S. D.  
 Moore, Thomas. .... Druggist, Waterloo, Ia.  
 Falmer, Horton. .... Druggist, 426 S. Sycamore St., Santa Ana, Cal.  
 Sherwin, Frank. .... Merchant, Willamina, Ore.

## Class of 1897

## MASTER OF SCIENCE

\*Davis, Homer. .... Physician, Genoa, Neb.

## BACHELOR OF SCIENCE

Ainsworth, Cephas B. .... Land, 406 Idaho St., Lewiston, Mont.  
 Atkinson, George. .... Map Publisher, La Fleche, Saskatchewan, Canada  
 Atkinson, Walter. .... Civil Engineering, 632 W. 67th St., Chicago, Ill.  
 Boyden, Frank E., Physician and Surgeon. ....  
 .... 116 Lewis St., Pendleton, Ore.  
 Clevenger, John W. .... Dentist, Chamberlain  
 Hargis, Christie (Saylor) .... 1019 6th Ave., E. Des Moines, Iowa  
 \*Hazel, Wm. A. .... Lawyer, 208 6th Ave. S. E., Aberdeen  
 Husted, Harley H. .... Died Jan. 14th, 1907, at Lincoln, Neb.  
 Jolley, Wm. G. .... Teacher, 5032 60th St. S. E., Portland, Ore.  
 Madden, Cassie (Crowley) Stenographer. ....  
 .... 1933 Fremont Ave. S., Apt. 25, Minneapolis, Minn.



Olson, Eva.....Teacher, 221 4th Ave. N., South St. Paul, Minn.  
 Parsons, Thos. S.....Prof. of Agro., U. of Wyo., Laramie, Wyo.  
 Roe, Robert.....Stockman, Highmore  
 Shuster, John W., Asso. Prof. Elec. Eng., U. of Wisconsin, Madison,  
 Thornber, Walter S., Director Extension Work, Washington State  
 College ..... Pullman  
 Walters, Wm. H. ....Real Estate, Brookings  
 West, Orpha (Sevy).....Freewater, Ore.  
 Whaley, Neva (Harding).....Brookings  
 Whitehead, Bower T.....Died April 1, 1917, at Brookings  
 Wilcox, Alice (Remsburg).....Thawville, Ill.  
 Work, Lloyd E.....Bond Salesman, 10 S. La Salle St., Chicago, Ill.  
 Young, Grace (Bullen).....260 Jessup St., Portland, Ore.

## Class of 1898

## MASTER OF SCIENCE

Chilcott, E. C., Agronomist in charge of Dry Land Agriculture,  
 .....Washington, D. C.  
 Harkins, Lilla A., Prof. Domestic Science.....  
 .....Montana Agri. College, Bozeman, Mont.  
 Parsons, Thos. S. ....Prof. of Agro., U. of Wyo., Laramie, Wyo.

## BACHELOR OF SCIENCE

Ainsworth, Howard, Fruit Grower .....  
 .....R. F. D. No. 17, Mountain View, Cal.  
 Ainsworth, Flora (Hazle).....767 Orizaba Ave., Long Beach, Cal.  
 Barton, Alice (White).....R. F. D. No. 7, Box 25D, Santa Ana, Cal.  
 Beck, Louis.....Engineer "Ana Dean Farm," Barberton, O.  
 Bolles, Myrick N.....Farmer, Brookings  
 Curtiss, Elsie (Crane).....Kettle Falls, Wash.  
 Davidson, Margaret (Crane)...Teacher, 2917 18th St., Spokane, Wash.  
 Fjerestad, Hans C.....Merchant, 655 S. Main Ave., Sioux Falls  
 Harding, Charles J.....Teacher, Carpenter, S. D.  
 Hegeman, Maude (Boyden).....116 Lewis St., Pendleton, Ore.  
 Hegeman, Mabel (Allison).....Univ. of Wash., Seattle, Wash.  
 \*Hodgeson, Herbert H., Top. Eng., U. S. Geol. Survey, Wash., D. C.  
 Knox, Wm. H.....With U. S. Dept. of Agr., Phoenix, Ariz.  
 Lawrence, Claude W.....Farmer, Sequim, Wash.  
 Lawrence, Clay.....Lawyer, Pioneer Bldg., Seattle, Wash.  
 Loveland, Addie (Towne) ....2104 Penn. Ave. S., Minneapolis, Minn.  
 Paddock, Jay M.....Died Dec. 16, 1916, at Eugene, Ore.  
 Riemann, Edith (Adams).....Oak Park, Ill.  
 Thornber, Wm. T.....Farmer, Colman  
 Towne, Judson, Teacher Physics, E. Side H. S.....  
 .....2104 Penn. Ave. S., Minneapolis, Minn.



**PHARMACY GRADUATES**

Beebe, Jay L. ....  
 ....Physician and Surgeon, First Natl. Bank Bldg., Anaheim, Cal.  
 Clevenger, J. W.....Dentist, Chamberlain  
 Holsey, Joseph.....Druggist, Veblen  
 Lee, Berton E.....Accountant, 104 S. 4th St., Mankato, Minn.

**Class of 1899****MASTER OF SCIENCE**

Dibble, Hattie (Stow).....Instr. Home Economics, Grandview, Wash.  
 Mathews, Hubert B.....Prof. of Physics, S. D. S. C.  
 Thornber, Walter S., Director Extension Work, Washington State  
 College .....Pullman  
 Whitten, John C. ....Prof. of Hort., U. of Missouri, Columbia

**BACHELOR OF SCIENCE**

Colegrove, Ina (Nelson) Care Bureau of Standards, Washington, D. C.  
 Findeis, Philip.....Lumber Merchant, Miranda  
 Lawrence, Mary M.....Prof. Home Economics, U. of Texas, Houston  
 Lawrence, Wm. H.....Prof. of Hort., U. of Missouri, Columbia  
 Mason, Nellie (Mason) .....Albia, Iowa  
 Nachtigal, Isaac.....Supt. Schools, Climbing Hill, Iowa  
 Sherwin, Howard H. ....  
 ....Civil Engineer, 781 Eastern Parkway, Brooklyn, N. Y.  
 Walter, Edith (Fystrom).....Died May 16, 1910, at Geneseo, N. D.  
 West, George.....Physician, Armstrong, Iowa

**PHARMACY GRADUATES**

Carr, George .....Druggist, Bison  
 Crowley, D. C. ....Druggist, 487 Hayes St., San Francisco, Cal.  
 Hepner, Frank.....Asst. Chemist, U. of Wyoming, Laramie  
 Kendall, Clinton D.....Druggist, Brookings  
 Lindsey, Charles .....Farmer, Winfred  
 Oulton, Frank .....Abstractor, Choteau, Mont.  
 Shriver, E. M.....Real Estate, Coos Bay, North Bend, Ore.  
 Taylor, C. DeWitt .....

**Class of 1900****BACHELOR OF SCIENCE**

Allen Hart M. ....Druggist, Marysville, Cal.  
 Anderson, Clark W. ....Died March 6, 1902, at Brookings  
 Beebe, Jay L. ....  
 ....Physician and Surgeon, First Natl. Bank Bldg., Anaheim, Cal.  
 Carlson, Esther (Lilygreen).....701 Magnolia St., St. Paul, Minn.  
 Carlson, Ella (Howard) .....Lake Preston  
 Davies, Sara (Sherwin) .....781 Eastern Parkway, Brooklyn, N. Y.

Davies, Mary (Hutchins) ..... Falls City, Neb.  
 DeLa, John W. .... Lumber, Velva, N. D.  
 Doughty, Mattison W. ....

Civil Engineer with Delaware & Lackawanna Ry., Hoboken, N. J.  
 Grove, Frank W. .... Dentist, Delta, Colo.  
 Harza, Carl. .Supt. of Meter Insts., 18 Washington Blvd., Detroit, Mich.  
 Kendall, Clinton D. .... Druggist, Brookings  
 Lawrence, Jessie (Hagerman)..... R. 1, Auburn, Wash.  
 Mathews, Alice (Albright)..... Black Eagle, Mont.  
 Mathews, Roscoe A..... Coal and Feed, Dutton, Mont.  
 Morrison, Freda (Cole) .....

Inst. Home Econ., 1213 W. Chestnut St., North Yakima, Wash.  
 Olson, Gustava (Hodgeson) ..... Linden, Md.  
 Williams, Callie (Olson)..... 116 N. Summit Ave., Sioux Falls

### PHARMACY GRADUATES

\*Bentley, Wm. S. .... Physician and Surgeon, Rapid City  
 Brosseau, Jesse E. .... Physician and Surgeon, Frankfort  
 Baldwin, Corwin B., .....

..... Druggist and Member State Board of Pharmacy, Rapid City  
 Connell, John C. .... Druggist, Luverne, Minn.  
 Else, Earl.... Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Eckhart, Henry..... Died at Menno, S. D.  
 George, William..... Physician and Surgeon, Selby  
 Hart, Bertrand ..... Physician and Surgeon, Onida  
 Jones, Robert ..... Druggist, Madison  
 West, Hugh H..... Physician and Surgeon, Spurling Bldg., Elgin, Ill.

### Class of 1901

#### MASTER OF SCIENCE

Knox, Wm. H..... With U. S. Dept. of Agr., Phoenix, Ariz.  
 Whitehead, Bower T..... Died April 1, 1917, at Brookings

#### BACHELOR OF SCIENCE

Bagley, Sussana.... Teacher, 3012 Ezekiel St., Lake Co., Zion City, Ill.  
 Bolles, Laura Jane..... Brookings  
 Brosseau, Jesse E..... Physician, Frankfort  
 Boyd, Mary (Labbitt)..... 3921 Davis St., Sioux City, Iowa  
 Cranston, Margaret (Young).... Died June 7th, 1907, at Oakes, N. D.  
 Culhane, Michael E..... Culhane Adjustment Co., Brookings  
 Davies, Autumn..... Instructor in History, H. S., Omaha, Neb.  
 Dodge, Fred E..... Hotel Manager, Redfield  
 Else, Earl.... Physician and Surgeon, Broadway Bldg., Portland, Ore.  
 Enos, Winifred (Kendall) ..... Brookings  
 Erickson, Martin L..... Forestry Service, Medford, Ore.  
 Evans, Lina (Roskie) ..... Brookings

Fishback, Myra (Kennedy) .....	86 College St., Calcutta, India
Harza, LeRoy F. ....	
... Civil Eng., Great Lakes Power Co., Sault Ste. Marie, Ont., Can.	
Hatton, John H. ....	Forestry Service, Forestry Bldg., Denver, Colo.
Johnson, Rhoda (Lee) .....	Died Oct. 18, 1909, Denver, Colo.
Kendall, Leonard J. ....	Telegraph Operator, Brookings
Kennedy, C. Leroy, Fruit Raiser, R. F. D. No. 18, Mountain View, Cal.	
Langdon, Lillian (Culhane) .....	Brookings
McElmurry, Loretta .....	
..... Instructor Domestic Science, State Normal, Madison, S. D.	
Mork, Theodore .....	Farmer, Des Lacs, N. D.
Phillips, Florence (Haas) .....	Arlington
Phillips, C. Louise, Librarian, U. S. Dept. Agr. ....	
.....	1343 Clifton St., Washington, D. C.

### PHARMACY GRADUATES

Cornell, Edward, Pharmacist .....	
.....	1824 Lyndale Ave. S., Minneapolis, Minn.
Tidball, Clyde .....	Druggist, Brookings

### Class of 1902

### BACHELOR OF SCIENCE

Fleming, Michael ...	City Mgr., M. A. Hanna Coal Co., St. Paul, Minn.
George, William A. ....	Physician and Surgeon, Selby
Hart, Bertrand M. ....	Physician and Surgeon, Onida
Hepner, Frank E. ....	Asst. Station Chemist, U. of Wyoming, Laramie
Johnson, Clara (Johnson) .....	Brookings
Johnson, Edward. ....	Died May 1, 1907, Tacoma, Wash.
Kephart, George. ....	Lawyer, 421 Iowa Building, Sioux City, Iowa
Lee, Berton E. ....	Accountant, 104 S. 4th St., Mankato, Minn.
Ramsey, Henry J. ....	
Expert, in Fruit Storage, Bureau Plant Industry, Washington, D. C.	
Roskie, Geo. ....	Abstractor, Brookings
Thornber, Edith (Cuckow) .....	La Junta, Colo.
Trooien, Ole N. ....	Died at Brookings, Dec. 21, 1915
Winegar, Laura .....	Nurse, Brookings

### PHARMACY GRADUATES

*Allison, Wm. F. ....	Prof. of Civil Eng., U of Wash., Seattle, Wash.
Boyden, Frank E. ....	
.....	Physician and Surgeon, 116 Lewis St., Pendleton, Ore.
Christianson, Bennett .....	Druggist, Volga
Hayter, McPherson .....	Druggist, Artesian
Jarratt, Arthur A. ....	Druggist, Colman
*Jarvis, S. Hall .....	Druggist, Faulkton
Leighty, James A. ....	Druggist, Winfred

Morton, Frederic M. .... Druggist, Lake City  
 Pickles, Chester E. .... Farmer, Elrod  
 Schnaidt, Henry .....  
 .... Druggist and President State Board of Pharmacy, Parkston  
 Schroeder, Anna (Gassman) ..... Howard  
 Thomas, John C. .... Druggist, Marion

### Class of 1903

#### MASTER OF SCIENCE

Crane, Austin B., Prof. of Math. and Civ. Eng., Spokane Univ.,  
 .... Spokane, Wash.  
 Hoy, Howard H. .... Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.

#### BACHELOR OF SCIENCE

Almond, Fred C. .... Died March 12th, 1909, at Clear Lake  
 Cole, John S., Examiner of Dry Land Agr. Exp. Stations, Dept.  
 of Agr. .... Washington, D. C.  
 Colegrove, Lettie (Drew) .... Swanville, Minn.  
 Cuckow, Fred W. .... Lawyer, La Junta, Colo.  
 Hubbart, Minnie (Holbein) .... Minot, N. D.  
 Johnson, Isaac .... Lumberman, Brookings  
 Kendall, Krete (Miller) .... Brookings  
 Langdon, Alice .... Stenographer, Brookings  
 Miller, Shirley P. .... Professor Zoology, S. D. S. C.  
 Norton, Frank A. .... Fruit Grower, Grand View, Wash.  
 Otterness, Jens M., Private Secretary to Senator Sterling .....  
 .... 441 Senate Office Bldg., Washington, D. C.  
 Peirce, E. Esther ..... Teacher, Billings, Mont.  
 Sanborn, Ethel I. .... P. G. Student, Box 969, Stanford Univ., Calif.  
 Seide, Louise (Prell) .... Calamus, Iowa  
 Sarvis, Roscoe J. .... Telephone Engineer, Aberdeen  
 Webster, James L. .... Farmer, Wenatchee, Wash.  
 Westcott, Geo. R., Asst. Engr., Mo. Pac. Ry. ....  
 .... 5764 Goodfellow Ave., St. Louis, Mo.

#### PHARMACY GRADUATES

Drew, Arthur W. .... Physician and Surgeon, Swanville, Minn.  
 Hall, Roy J. .... Druggist, Oldham  
 Heston, Edward C. .... Physician and Surgeon, Roslyn, Wash.  
 Hollister, Arthur R. .... Traveling Salesman, Madison  
 \*Howell, John E., Chemist, S. P. R. R. ....  
 .... 504 Avondale Ave., Houston, Texas  
 Johnston, Samuel ..... Druggist, Hazel  
 Norton, Frank A. .... Fruit Grower, Grand View, Wash.  
 Steiner, Frederick W., Physician, 323 Union Ave., Havre de Grace, Md.  
 Trumm, Robert E. .... Druggist, Hayti

Van Dusen, Fred J. ....Lead  
Williams, Percy, Physician and Surgeon .....  
.....557 Spring St., Los Angeles, Cal.  
Young, Alfred J. ....Farmer, Adanac, Saskatchewan

Class of 1904

MASTER OF SCIENCE

Trooien, Ole N. ....Died at Brookings, Dec. 21, 1915

BACHELOR OF SCIENCE

Binford, Wm. W. ....Lumberman, Greenleaf, Idaho  
Bushnell, Maude (Kelton) ....Poynette, Wis.  
Loucks, Anna Y. (Brown) ....Brookings  
Mattice, Albert F., Physician and Surgeon .....  
.....1017 Cobb Bldg., Seattle, Wash.  
McGarry, Lawrence R. ....Merchant, Mansfield  
Ruth, Thomas H. ....Veterinary Surgeon, DeSmet  
Sanderson, Everett G. ....Farmer, Aurora  
Sherwin, Ralph L. ....Civil Engineer, Bay Harbor, Fla.  
Smith, Wm. J. ....Missionary, Damaguete, P. I.  
Thompson, Clarence ....Farmer, Dell Rapids  
Walter, L. Erving ....Asst. State Chemist, Laramie, Wyo.

PHARMACY GRADUATES

Anderson, Ernest ....Druggist, South Shore  
Dillon, Cornelius.....Druggist, Hotel Smede Bldg., Eugene, Ore.  
Frick, Harry E.....Candy Manufacturer, Mitchell  
Goodale, Alton R.....Druggist, Angeles Pharm., Los Angeles, Cal.  
Hooker, Henry ....Physician, Danville, Ill.  
Koch, Arthur E.....Attorney, 621 Ford Bldg., Detroit, Mich.  
Ramsdell, Leonard C. ....Druggist, Flandreau  
\*Thompson, Gottfrey.....Physician and Surgeon, Sioux Falls  
Weisflock, Theodore ....Druggist, Frankfort

Class of 1905

MASTER OF SCIENCE

Hepner, Frank.....Asst. Chemist, U. of Wyoming, Laramie  
Norton, Frank A.....Fruit Grower, Grand View, Wash.  
Phillips, C. Louise, Librarian, U. S. Dept. Agr. ....  
.....1343 Clifton St., Washington, D. C.  
Thompson, Clarence ....Farmer, Dell Rapids  
Walter, L. Erving ....Asst. State Chemist, Laramie, Wyo.

BACHELOR OF SCIENCE

Boyden, Guy L., Examining Physician .....  
.....Camp Lewis, American Lake, Wash.  
Chappell, Bessie .....Instr. State Normal, Las Vegas, N. Mex.



Chappell, Elsie (Wilson) .....	Brookings
Davis, Clifford W.....	Farmer, 2337 Grant St., Berkeley, Cal.
Elliott, Roy K. ....	Electrician, 20 Bay State Ave., Somerville, Mass.
Fassett, Della (Loucks) .....	Watertown
Fishback, Van Dusen .....	Loans, Brookings
Forrest, Victor E., Contractor, 202 Com. Ex. Bldg., Minneapolis, Minn.	
Fulkerson, Vincent.....	Special Agent, Dept. of Agr., Fallon, Nev.
Grove, Mary (Potter) .....	Jackson Ave., Fountain City, Tenn.
Hage, C. F. ....	Druggist, Toronto
Howg, Edwin M., Physician and Surgeon, Mayo Clinic, Rochester, Minn.	
Jensen, Lewis N. ....	Special Agent U. S. Dept. Agr., Amarillo, Texas.
Johnson, Carl L. ....	Elec. Eng., Pittsfield, Mass.
Mathews, Harry E. ....	Railway Service, Las Vegas, Nevada
Miller, Ralph L. ....	Lumberman, Melville, N. D.
Murphy, Matt W. ....	Lawyer, 408 8th Ave. S., Fargo, N. D.
Nelson, John Harland.....	Bureau of Standards, Washington, D. C.
Ronning, Oscar E.....	Supt. Schools, Glenham, S. D.
Schaphorst, Wm. F., Technical Writer .....	
.....	411 St. John's Place, New York City
Seeger, Adolph M.....	Elec. Eng., Light & Power Co., Toledo, O.
Slocum, Ina S. (Deeley).....	2818 Granville St., Vancouver, B. C.
Thogerson, Arthur A...Contractor, 3502½ Morrison St., Portland, Ore.	
Walters, Daisy .....	Teacher, Bruce
Williams, Harry, Real Estate .....	
.....	L. A. Investment Bldg., Los Angeles, Cal.
Willams, Percy, Physician and Surgeon .....	
.....	557 S. Spring St., Los Angeles, Cal.

### PHARMACY GRADUATES

*Fjerestad, Carl .....	Druggist, Elkton
Howg, Edwin M., Physician and Surgeon, Mayo Clinic, Rochester, Minn.	
Larson, Lars P. ....	Teacher, R. 5, Howard
Mathews, Harry E. ....	Railway Service, Las Vegas, Nevada
McCurdy, Walter .....	Banker, Lane
Morton, Grant J., Federal Drug Ins., 105 Custom House, Portland, Ore.	
Pottinger, Geo. ....	Druggist, Valley Springs
Thompson, Clarence .....	Farmer, Dell Rapids
Volin, Porter .....	Physician, Lennox

### Class of 1906

### BACHELOR OF SCIENCE

Aldrich, G. Malcolm, Prin. Calhoun Schools.....	Hopkins
Barrett, J. Wylie.....	Electrical Engineer, Plankinton
Bonesteel, Bee (Dillman) .....	Newell
Brownell, Ellen (Wellington) .....	R. R. A., Brawley, Cal.
Burghardt, Roy D.....	Electrician, 1007 1st Ave., Seattle, Wash.

Carpenter, Abbie (Challmers) . . . .	E. 1121 Nora Ave, Spokane, Wash.
Chilcott, Ellery F. . . . .	Supt. Ex. Station, Woodward, Okla.
Coller, Fred A., Examining Physician . . . . .	
.....	Camp Lewis, American Lake, Wash.
Davis, Gladys (Grace) . . . . .	Akron, Colo.
Erstad, Alfred J. . . . .	Electrician, Standard Mach. Co., Portland, Ore.
Evans, Edna V. . . . .	Instr. Home Economics, Deer Park, Wash.
Grace, Oliver . . . . .	Supt. U. S. Ex. Sta., Akron, Colo.
Kennard, Frank L. . . . .	Agronomy, Extension Work, Colfax, Wash.
Knox, Arthur H. . . . .	Farmer, Alpena
Koch, Arthur E. . . . .	Lawyer, 621 Ford Bldg., Detroit, Mich.
Moffatt, Margaret E. . . . .	Teacher, Bruce
Reich, Rose M. . . . .	Teacher, Tunnel City, Wis.
Thornber, Jessie B. . . . .	La Junta, Colo.
Youngberg, Guy E. . . . .	P. G. Student, Harvard Univ., Boston, Mass.

### PHARMACY GRADUATES

Allison, Harold . . . . .	Physician and Surgeon, Heppner, Ore.
Bergeim, Olaf, Asst. in Chem., Jefferson Med. College. . . . .	
.....	10th and Walnut Sts., Philadelphia, Pa.
Davies, Gladys (Grace) . . . . .	Akron, Colo.
Harben, Bartlett L. . . . .	Died June 10, 1912, at Winner, S. D.
Holm, A. B. . . . .	Farmer, Brookings
Locke, Chas. . . . .	Pharmacist, Brookings
Wipf, Michael J. . . . .	Druggist, Alsen, N. D.

### Class of 1907

### MASTER OF SCIENCE

Culhane, Michael E. . . . .	Culhane Adjustment Co., Brookings
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### BACHELOR OF SCIENCE

Binnewies, Mabel (Shanley) . . . . .	Brookings
Briggs, Stephen F., of Briggs & Stratton Co. . . . .	
.....	258 Milwaukee St., Milwaukee, Wis.
Burch, Walter S., Elec. Engr., with Rochester Railway & Light Co. . . . .	
.....	81 S. Fitzhugh St., Rochester, N. Y.
Christianson, Christine (Buck) . . . . .	1644 Adams St., Denver, Colo.
Lillman, Arthur C. . . . .	Special Agent, Dept. of Agr., Newell
Dutcher, R. Adams . . . . .	Prof. of Agr. Chem., U. of Minn., Minneapolis
Elliott, Bruce A. . . . .	Died at Brookings, Oct. 29, 1917
Elliott, Ross W. . . . .	Manual Training Teacher, Hibbing, Minn.
Fjerestad, Alman . . . . .	Electrical Engineer, Estelline
Gagel, Gerald . . . . .	Electrician, Rialto, Cal.
Hofstetter, Geo., Instructor Manual Training . . . . .	
.....	Govt. School, Vigan, Ilocos Sur, P. I.

Kirk, John R. ....Farmer, Springfield  
 Johnson, Aaron G., Plant Pathologist, U. of Wis. ....  
 .....1910 West Lawn Ave., Madison, Wis.  
 Knutson, Mabel (Troolen) ....Teacher, Brookings  
 McCordic, Clare ....Farmer, Doland, S. D.  
 McElmurry, Rilla (Eells) .....129 Wellendorf Ave., Youngstown, O.  
 Morton, Grant J...Fed. Drug. Ins., 105 Custom House, Portland, Ore.  
 Reich, J. Carl .....Western Elec. Co., Garfield Sta., Chicago, Ill.  
 Salmon, Cecil, Prof. Agronomy, Kansas Agr. College .....  
 .....1630 Leavenworth, Manhattan  
 Sanderson, Eugene, Electrician .....  
 ..Care Power Eng. Dept., N. Y. Telephone Co., Jersey City, N. J.  
 Tuttle, Volney J., General Electric Co., D. C. Eng. Dept. ....  
 .....Schenectady, N. Y.  
 Underwood, Genevieve (Schmidt) .....Bryant  
 Westcott, Ruth M. (Johnson)....1910 West Lawn Ave., Madison, Wis.  
 Work, Mary L.....Stenographer, 1442 E. 59th St., Chicago

### PHARMACY GRADUATES

Dexter, David F. ....Druggist, Canton  
 Roney, Ray W. ....Druggist, Chester  
 Ennis, Herbert I. ....Druggist, Volga  
 Kartrude, Inga M. ....Teacher, Hardwick, Minn.

### Class of 1908

### MASTER OF SCIENCE

Coller, Fred A., Examining Physician .....  
 .....Camp Lewis, American Lake, Wash.  
 Koch, Arthur E.....Attorney, 621 Ford Bldg., Detroit, Mich.

### ELECTRICAL ENGINEER

Elliott, Ross W. ....Manual Training, Hibbing, Minn.

### BACHELOR OF SCIENCE

\*Alton, Benjamin H. ....Physician and Surgeon, Brookings  
 Bergelm, Olaf, Asst. in Chem., Jefferson Med. Col., Philadelphia, Pa.  
 Carpenter, Clarence A. ....Electrical Engineer, Rapid City  
 Chilcott, Ralph .....Farmer, Vienna, Va.  
 Cooley, William R. ....Stockman, Springfield  
 \*Griffith, T. Edwin .....Civ. Eng., Mott, N. D.  
 Holsey, Ernest.....Elec. Eng., Y. M. C. A. Bldg., Spokane, Wash.  
 Hubbart, Edith J. ....Asst. Librarian, S. D. S. C.  
 Hyde, Hallie W. ....Inst. Dom. Sci., U. of Idaho, Moscow  
 Kelly, Amy .....Inst. Dom. Sci., U. of Idaho, Boise  
 Kendall, Nellie G. ....Instructor in English, S. D. S. C.  
 Locke, Francis J., Asst. Mgr., Western Electric Co. ....  
 .....38 W. 61st St., New York, N. Y.

Mathews, Oscar R.	Expert Dry Land Agr., Newell
Mayland, Amy	Died Feb. 17, 1909, at Lincoln, Neb.
Mayland, George R.	Co. Agr. Agt., Alexandria
Nelson, Aaron L., Traveling Electrician	
.....	With G. E. Co., Deer Lodge, Mont.
Nilsson, Edward, Artist, Capital Engraving Co.	
.....	1019 S. 5th St., Springfield, Ill.
Olberg, Fred C.	5407 Ballard Ave., Seattle, Wash.
*Perry, William J.	White
*Soreng, Edward M., Electrician, with Briggs-Stratton Co.	
.....	198 15th St., Milwaukee, Wis.
Sperb, John J.	Civil Eng., Ocean Falls, B. C., Canada
Ulrich, Darwin William	Farmer, Alma, Wis.
Underwood, Beatrice	Watertown
Underwood, Loto (White) Brooklyn Botanical Gardens	
.....	Brooklyn, N. Y.
Week, Gordon A., Electrical Engineer, 711 Post St., San Francisco, Cal.	
West, Florence E.	Teacher Hill Top Farm, Rhinebeck, N. Y.
Whitehead, Lindsey W.	Instructor Civ. Eng., State College, Pa.
Williams, Ruby (Heil)	921 W. 11th St., Riverside, Cal.

### PHARMACY GRADUATES

Hoch, Joseph L.	Druggist Tyndall
*Murphy, James P.	Druggist, Rapid City
Olberg, Fred C.	Druggist, 5407 Ballard Ave., Seattle, Wash.
*Quiggle, Ernest J.	Pharmacist, Groton

### Class of 1909

### MASTER OF SCIENCE

Mathews, Oscar R.	Expert Dry Land Agr., Newell
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### ELECTRICAL ENGINEER

Elliott, Bruce A.	Died at Brookings, Oct. 29, 1917
Schaphorst, Wm., Technical Writer 411 St. Johns Place, New York City	

### BACHELOR OF SCIENCE

Bacon, Eva (Paulson)	Castlewood
Bushnell, Edna (Lindahl)	Librarian, Brookings
Camp, Fred	Farmer, Winfred, Mont.
Catlett, Winifred	Teacher Home Economics, Grand Rapids, Wis.
Champlin, Manley	Asst. Prof. of Agronomy, S. D. S. C.
Clarke, Roy	Chicago, Ill.
Coughlin, Chas., Supt. Construction, Briggs-Stratton Co.	
.....	258 Milwaukee St., Milwaukee, Wis.
Denhart, Cecil	Grain Dealer, White
Erwin, Ada	Home Eco., Ex. Dept., Boise, Idaho
Evans, Iva (Morrison)	Brookings



- Furnstahl, John.....Died Dec. 16, 1916, at Ajo, Arizona  
 \*Jensen, Harvey ..Real Estate, 943 Andrus Bldg., Minneapolis, Minn.  
 Jones, Robert .....Lawyer, Milbank  
 Kremer, Alvin.....Cashier, U. S. Natl. Bank, Portland, Ore.  
 Lane, Lloyd .....Farmer, Beresford  
 McKeown, Ralph .....Farmer, Sentinel Butte, N. D.  
 Marquis, Sidney, Electrical Engineer .....  
 .....With Briggs & Stratton Co., Milwaukee, Wis.  
 Matheny, Chester, Elec. Eng., Sales Mgr. ....  
 .....565 Washington Blvd., Chicago, Ill.  
 Odland, John .....Farmer, Sentinel Butte, N. D.  
 Palm, Ellen (Olson) .....Norden  
 Peirce, Ruth, Music Student .....  
 .....4419 N. Racine Ave., 2nd Apt., Chicago, Ill.  
 Phillips, Geo. ....Y. M. C. A. Sec., S. D. S. C., Brookings  
 Sarvis, Johnson.....Special Agent, Dept. of Agr., Mandan, N. D.  
 Sperb, Frank.....Civil Engr., Woodburn, Ore.  
 Swering, Joe, Electrical Engineer .....  
 .....With Westinghouse Mfg. Co., Wilkesburg, Pa.  
 Treacy, Timothy, Catholic Priest .....  
 .....487 Mich. Ave. S. E., Washington, D. C.  
 Vernlund, Carl, Physician and Surgeon .....  
 .....Hartford Hospital, 211 Church St., Hartford, Conn.  
 White, Orland..Botanist, Brooklyn Botanical Gardens, Brooklyn, N. Y.  
 Wickre, Jacob .....Farmer, Langford  
 Wright, Mary (Dutcher)....Dept. of Chem., U. of Minn., Minneapolis

### PHARMACY GRADUATES

- Abbott, Guy S. ....Druggist, Yale  
 \*Buck, Ervin .....Druggist, Wessington Springs  
 \*Crosby, LeRoy .....Pharmacist, Hitchcock  
 Dickey, James .....Druggist, Iroquois  
 Hage, Christian .....Druggist, Toronto  
 Wilson, Frank M. ....Druggist, Ronan, Mont.  
 Youngberg, Guy E.....P. G. Student, Harvard, Univ., Boston, Mass.

### Class of 1910

### MASTER OF SCIENCE

- \*Alton, Benjamin H. ....Physician and Surgeon, Brookings  
 Dutcher, R. Adams ...Prof. of Agr. Chem., U. of Minn., Minneapolis  
 Youngberg, Guy E.....P. G. Student, Harvard, Univ., Boston, Mass.

### MECHANICAL ENGINEERING

- Hofstetter, George, Instr. in Manual Training .....  
 .....Govt. School, Vigan, Ilocos Sur, P. I.



**BACHELOR OF SCIENCE**

Atkinson, Fay .....	Farmer, Coal Harbor, N. D.
*Barber, Floyd, Civil Engineer .....	
.....	2006 33rd St., Care Co. Engineer, Everett, Wash.
Biggar, Howard H. ....	U. S. Dept. of Agr., Washington, D. C.
Crothers, Harold, Inst. in Elec. Eng., U. of Wisconsin, Madison, Wis.	
Crothers, Ralph .....	Farmer, Badger
Fickle, Walter .....	Died Jan. 26, 1911, at Blunt
*Fridley, Ray .....	Brookings
Grotta, Edwin .....	Implement Dealer, Esmond
Johnson, Charles .....	Hardware Merchant, Hetland
Johnson, Milla (Anderson) .....	New England, N. D.
Kartrudge, Inga .....	Teacher, Hardwick, Minn.
Kelly, T. B. ....	Prof. of Music, State Normal, Fremont, Neb.
Lothrop, Elmer .....	Electrical Engineer, Redfield
Lloyd, Robert .....	Elec. Contr., Santa Ana, Cal.
Matheny, Allie (Woolledge) .....	Minot, N. D.
Matheny, Fred....	Civil Eng., 2004 L. C. Smith Bldg., Seattle, Wash.
Morrison, Joseph .....	Farmer, Elbon
Nagel, Herman, Research Chemist, with Douglas Starch Co. ....	
.....	Cedar Rapids, Ia.
Ort, A. A., Civil Engineer .....	
.....	Care Chief Eng., Miami Conservancy District, Dayton, O.
Palm, Andrew .....	County Agricultural Agent, Watertown
Sexauer, Elmer .....	Grain, Brookings
Sheldon, Nettie (Atkinson) .....	Coal Harbor, N. D.
Wahl, Walker W.....	Real Estate and Live Stock, Rosebud, Mont.
Welch, Cecile (Sexauer) .....	Brookings
*Wohlheter, Verne .....	Attorney, Sisseton
Yocom, Frank .....	Inst. in Manual Training, Holtville, Cal.

**PHARMACY GRADUATES**

Brown, Geo. B. ....	Farmer, Clark
Goldthorp, George .....	Druggist, Conde
Morrison, Joseph .....	Farmer, Elbon
Williams, Arthur .....	Pharmacist, Aberdeen

**Class of 1911****MASTER OF SCIENCE**

Sarvis, Johnson.....	Special Agent, Dept. of Agr., Mandan, N. D.
White, Orland..	Botanist, Brooklyn Botanical Gardens, Brooklyn, N. Y.

**BACHELOR OF SCIENCE**

*Balmat, John .....	Civil Engineer, Yankton, S. D.
Catlett, Marguerite .....	Brookings
*Cooledge, Leslie.....	Asst. Prof. Bacteriology, East Lansing, Mich.
Cottingham, Jay .....	Cashier, Colorado Springs, Colo.

Erwin, Ruth (Bibby) .....	Madison, S. D.
Finley, Vollmar.....	County Agricultural Agent, Brookings
Fridley, Bess (Fromme) .....	Blacksburg, Va.
Fridley, Richard.....	Died Aug. 23, 1912, at Lake Benton, Minn.
Fromme, Fred.....	Prof. of Bot., Va. Inst. of Technology, Blacksburg
Gropengieser, Fred .....	Asst. Bank Cashier, Onida
Haas, Carrier (Quinn) .....	Badger
Hallen, Harold .....	Electrical Engineer, Ord, Neb.
Huntemer, Percy .....	Co. Agr. Agt., Melrose, Minn.
Jarman, Maebelle.....	Instr. Home Economics, Aberdeen
Johnson, Clifford .....	Died September, 1912, at Huron
Knutson, Geneva (Flittie) .....	Brookings
Ladd, Amy .....	Physical Director, 1007 Grand St., Carthage, Mo.
*Mathewson, Lynn .....	Mech. Eng., Tripp
McMillan, Orville .....	Prin. of Schools, Alpena
Meharg, Max .....	Inst. Man. Training, Wells, Nevada
Mitchell, Harry, Elec. Eng., 2933 Girard Ave. S., Minneapolis, Minn.	
Odland, Ole M., Theological Student, Luther Seminary, St. Paul, Minn.	
Peterson, Helen .....	Brookings
Plocker, Florence (Shelden) .....	Perdue, Sask., Canada
Quinn, Roy .....	U. S. Land Classifier, Lordsburg, N. Mex.
Randall, Frank .....	Mech. Engr., Aberdeen
Sherwin, Muriel (Stoll) .....	Brookings
Starring, Cecil ....	Asst. in Hort., Mont. Agr. College, Bozeman, Mont.
Swenehart, John .....	Co. Agr., Agt., Crandon, Wis.
Throop, Lotta (Odland) .....	Sentinel Butte, N. D.
Tinker, Mabel .....	Brookings
Wilson, R. O. ....	Prof. Sec. Studies, Mont. State Col., Bozeman, Mont.

### PHARMACY GRADUATES

*Fellows, Carl .....	Druggist, Plankinton
Martin, Earl S. ....	Merchant, Oldham
Serles, Earl .....	Prof. of Pharmacy, S. D. S. C.
Shea, Henry .....	State Chemist, Bozeman, Mont.
Vis, Heyme .....	Druggist, Midland

### Class of 1912

### BACHELOR OF SCIENCE

Atwood, Geo. B. ....	Veterinarian, Arlington
Bibby, Irwin J. ....	Co. Emer. Agt., Madison
Bisbey, Guy R.....	Asst. in Botany, U. of Minnesota, Minneapolis
Dachtler, Fred J. ....	Farmer, Sturgis
*Edson, Ray W.....	With Gen. Elec. Co., 24 Baker St., Lynn, Mass.
Erdmann, Henry E. ....	Asst. Agr. Economics, U. of Ohio, Columbus
Granger, Paul F.....	Civ. Eng., 1444 W. 22nd St., Los Angeles, Cal.
Hathaway, Floyd C. ....	Co. Agr. Agt., Grafton, N. D.

Jensen, Russell C. ....Co. Emer. Agt., Canton, S. D.  
 Kremer, Henrietta (Furnstahl) .....Ajo, Ariz.  
 Larson, John. ....Seedsman, Portland Seed Co., Portland, Ore.  
 Marchant, Guy B. ....Elec. Engr., 323 W. 23rd St., New York City  
 Oakland, Irwin S., Student Northwestern School of Dentistry....

..... Chicago, Ill.  
 \*Peck, Arthur R. ....Elec. Engr., Schenectady, N. Y.  
 Pence, Clay.....Elec. Salesman, 313 Penwood Ave., Wilkinsburg, Pa.  
 Reeve, John E. ....Elec. Engr., 125 Benedict Road, Pittsfield, Mass.  
 Revell, Grace (Bailey) .....Ames, Ia.  
 Sauder, Wm. O. ....Forestry, Saguache, Colo.  
 \*Schaphorst, Ben .....Lawyer, Brookings  
 Skinner, Lila.....Inst. in Home Economics, U. of Ohio, Columbus  
 \*Sparks, Henry .....Civil Engineer, Mitchell  
 Stearns, Arthur J. ....Elec. Engr., Buhl, Idaho  
 Welker, Verne E., Elec. Engr., 2875 Irving Ave. S., Minneapolis, Minn.

### PHARMACY GRADUATES

Bacon, Harry .....Druggist, Edgemont  
 Christianson, Helen (Quinn) .....Badger  
 Clark, Robt. W. ....Died in Sioux Falls, March 26, 1916  
 Farnham, Beatrice .....Druggist, Waubay  
 \*Farrar, Vere .....Pharmacist, Aberdeen  
 Grant, Clyde .....Pharmacist, Iowa City, Ia  
 Holstrom, Will .....Pharmacist, Carthage  
 Holleman, William .....Pharmacist, Springfield  
 Leavitt, Ethel .....Pharmacist, Milbank  
 Morton, Richard .....Pharmacist, New Effington  
 Serles, Raymond .....Pharmacist, Salem

### Class of 1913

### BACHELOR OF SCIENCE

Basgen, Fred .....Structural Engineer, Watertown  
 Binnewies, Edward R. ....Asso. Prof. of Chem., S. D. S. C.  
 Brigham, Ruth .....Brinklow, Md.  
 Cole, Glenn H. ....Farmer, Gary, S. D.  
 Dunn, Everett W. ....Civil Engineer, Eldora, Iowa.  
 Engstrom, Carl .....Electrical Engineer, Hutchinson, Minn.  
 Faulkner, Hugh .....Farmer, Burkmere  
 Fowlds, Matthew .....Asst. in Agronomy, S. D. S. C.  
 \*Freiberg, George .....Mo. Bot. Gardens, St. Louis, Mo.  
 Greenly, Maurice G., Sci. Teacher, 1036 Green St., Honolulu, Hawaii  
 Gurslee, Chris B., Inst. in Northwestern School of Dentistry ....  
 .....1725 Wilson Ave., Chicago, Ill.  
 Heiser, Agnes K. (Yunker) .....Barnard  
 Huyek, Nina B. ....Dom. Sci. Dem., Blackfoot, Idaho

King, Stanley	Civil Engineer, Watertown
Kremer, Ralph C.	Mining Eng., Ajo, Ariz.
Landweer, Earl	Electrical Engineer, Hartford
McHugh, Frank James	Farmer, West Point, Miss.
Matheny, Hazel A.	Conde
Morrow, Strayer (Sauder)	Saguache, Colo.
Morrison, Guy E.	Agr. Expert, Brookings
Nilsson, Anna (Patterson)	Henning, Minn.
*Nord, Roy A.	Lawyer, Huron
*Olson, Thos. G.	Elec. Eng., Canby, Minn.
Pier, Clarence L.	Ice Manufacturer, Mitchell, S. D.
Rilling, Harry M.	Co. Agr. Agt., Wessington Springs
Sanderson, Harry M.	Supt. Sub-Station, Vivian
Shanley, Clarence	Deputy State Dairy Inspector, Brookings
Shea, Henry	State Chemist, Bozeman, Mont.
Shepard, Helen (Atwood)	Arlington
Sloan, Edith	Instr. Home Economics, Watertown
Somers, Grace	Instructor Home Economics, Prescott, Ariz.
Sponholz, Lydia (Britzius)	Madison
Templeton, Mabel (Johnson)	Hetland
Wood, Ruth A.	Inst. Home Economics, Caldwell, Idaho

### PHARMACY GRADUATES

*Eidsmoe, Clark T.	Sisseton
*Johnson, Arthur F.	Pharmacist, Springfield, Minn.
Lawler, Frank M.	Pharmacist, with L. T. Dunning Co., Sioux Falls
Null, Ralph L.	Pharmacist, Miller
Simpson, Wm. R.	Pharmacist, Flandreau
*Soule, Roy H.	Druggist, Farmer
Tommeraasen, Corne	Pharmacist, Madison
Wornson, Walter A.	Medical Student, Milwaukee, Wis.

### Class of 1914

#### BACHELOR OF SCIENCE

Armstrong, Lillian (Kirlin)	1811 2nd Ave. S., Minneapolis, Minn.
Armstrong, Inez, Instructor in Home Economics	Washington, Agr. College, Pullman
*Ausman, Leslie V.	County Agr., Agent, Clark
Britzius, Arno	Farmer, Madison
Lushey, Alfred	Co. Emer. Agt., Plankinton
Casley, Lulu	High School Instructor, Bryant
Chappell, Vincent	Prof. Dairy Mfg., Oregon Agr. Col., Corvallis
Clifford, Perry	Farmer, Cresbard
Dulitz, Helen	Teacher, Martinique Apts., Seattle, Wash.
Elliott, Robert	Registrar, S. D. S. C.
Gilbertson, Geo.	Asst. in Entomology, S. D. S. C.



*Gotthold, Roy	Manual Training, Miller, S. D.
Grinols, Hazel (Palm)	Watertown
Gropengieser, Bessie	Teacher, Onida
Halladay, Clinton, Civil Engineer	
.....	With Rock Island Ry., 6930 Eggleston Ave., Chicago, Ill.
Hartgering, Frances, Inst. Dom. Sci., 6039 Hoeveler St., Pittsburgh, Pa.	
Hegdahl, Paul	Farmer, Madison
Heck, Emil, Engineer of Tests	
.....	U. S. Forestry Products Lab., Madison, Wis.
*Hofstetter, Clarence	Inst. in Manual Training, St. Maries, Idaho
*Knutson, Charlie O.	Electrician, Canby, Minn.
Legler, Edward V.	Elec. Eng., 306 Campbell Ave., Schenectady, N. Y.
Luebke, Esther	Inst. Domestic Science, Gettysburg
Persun, Francis J. E.	Inst. in Agr., Morgan, Minn.
Sexauer, Laura	Teacher, Brookings
Shepard, Albert D.	Chemist, Union Powder Co., Tarlin, N. J.
Slightam, Kate	Inst. in Dom. Science, Monroe, Wis.
Sherwood, Reginald	Asst. in Chemistry, S. D. S. C.
Sloan, Sam	Farmer, Brookings
Somers, Ruth (Haugen)	Brookings
Valentine, Vey	County Agr. Agt., Ft. Pierre
White, Henry D.	Asst. Co. Agt., Ft. Pierre
Wilkins, Scott	Asst. in Farm Crops, Iowa State College, Ames, Iowa
Wood, Nina (Sloan)	Brookings
*Wills, Ernest V.	Brookings

### PHARMACY GRADUATES

Eng, Julius	Pharmacist, Bruce
Kadinger, Lewis	Pharmacist, Peever
*McDougal, Tyrell	Britton
Nelson, Lewis	Instr. in Science and Athletic Coach, Brookings
Ray, Winifred	Druggist, Aurora
Shaw, Albert J.	Pharmacist, Miller
Sivertson, Anna	Pharmacist, Mill City, Ore.

### Class of 1915

#### MASTER OF SCIENCE

Binnewies, Edward R.	Asso. Prof. of Chem., S. D. S. C.
Mayland, George R.	Co. Agr. Agt., Alexandria
Shea, Henry	State Chemist, Bozeman, Mont.
Sherwood, Reginald	Asst. in Chemistry, S. D. S. C.
Sloan, Sam	Farmer, Brookings

#### BACHELOR OF SCIENCE

Bolland, Jens	Farmer, Pierpont
Caldwell, Florence (Heck), c/o Forestry Products Lab., Madison, Wis.	
Caldwell, Lacey	Co. Agr. Agt., Hayti



*Clarke, Bruce	Pharmacist, Pierre
Cooley, Hazel (Keddie)	Bear Lake, Minn.
*Culhane, Alexander	Brookings
*Culhane, James, Elec. Engineer	Brookings
Drury, Lillian	Secretary, Chamberlain
Freeman, John	Farmer, Rapid City
Gardner, Harry	Co. Agr. Agt., Sturgis
Gilbert, Gladys (Ortmayer)	College Park, Md.
Graham, William B.	Farmer, Freeport, Minn.
Hale, Ruth	Instr. in Dom. Sci., Fairchild, Wis.
*Iverson, Carrold	Brookings
*Johnson, Carl J.	Brookings
Jones, A. Patti	Student, 1728 4th St. S. E., Minneapolis, Minn.
Keck, Dallas	Co. Emer. Agt., Yankton
Kremer, Frank	Law Student, U. of Michigan, Ann Arbor
*Lanphier, Ira	Milbank
Lynch, Arthur	Dairyman, East Berkshire, Vt.
Nixon, Jessie	Teacher, St. Paris, Ohio
Nord, Florence	Instr. Home Economics, State Normal, Springfield
Pilmer, Miller	With Des Moines Elec. Co., Des Moines, Iowa
Potter, Ernest C.	Minister, Athens, Pa.
Serles, Earl	Prof. of Pharmacy, S. D. S. C.
Wornson, Walter	Medical Student, Milwaukee, Wis.

### PHARMACY GRADUATES

Abbott, Walter G.	Pharmacist, Tyndall
*Clark, Bruce E.	Pharmacist, Pierre
Colliton, Ora A.	Pharmacist, 586 Laurel Ave., St. Paul, Minn.
Giannonatti, Elene	Pharmacist, Ludlow
Haugen, Martin Bernhard	Pharmacist, Hartford
Little, Guy Almond	Druggist, Brandt
*Loesch, William Patrick	Druggist, Bruce
*Olson, Edward Furness	Pharmacist, Alcester
*Randall, Harry Eugene	Pharmacist, Arlington
Tolagson, Clarence Ferrold	Pharmacist, Brookings

### Class of 1916

### MASTER OF SCIENCE

Bolland, Jens	Farmer, Pierpont
Gilbertson, Geo. L.	Asst. in Entomology, S. D. S. C.
Loomis, Howard	Asst. in Agronomy, S. D. S. C.
Morrison, Joseph	Farmer, Elbon
Rilling, Harry M.	Co. Agr. Agt., Wessington Springs
Sherwood, Reginald	Asst. in Chem., S. D. S. C.

## BACHELOR OF SCIENCE

*Abbott, Cleveland	Watertown
*Allison, Arthur	Brookings
Anderson, Georgia	Instr. Home Economics, Rapid City
Austin, Ethel	Instr. in Home Economics, Faulkton
Avery, Blanche (Johnston)	Hot Springs
Bergeim, Jos.	Principal High School, Elkton
Caldwell, Kate (Weber)	Instr. Home Ec., School of Agr., S. D. S. C.
*Calkins, Fred	Miller
Chapman, Daphne (Serles)	Brookings
Dawes, Adelia	Instr. English and History, Fulton
Dott, Delia	Student Sioux Falls College
*Evers, Clarence	Big Stone
*Fish, Warren D.	Mechanical Engineer, Ipswich
*Fridley, Harry	Farmer, Brookings
Fryer, Julia	Student U. of Minnesota, Minneapolis
Gold, Ralph	Electrician, Big Stone
Greene, Bernice (Gardner)	Sturgis
Greeves, Bertha (Rudd)	Miller
Grudem, William, Electrician	
	With Westinghouse Mfg. Co., Wilkinsburg, Pa.
Hanten, Matt	Farmer, Watertown
Heiser, Marie	Teacher, White
Humphrey, Francis	Inst. Man. Training, Frazee, Minn.
*Jerlow, Morris	Carthage
Johnston, Ralph E.	County Agr., Agent, Hot Springs
Kennard, Geo.	Co. Emer., Agt., Sioux Falls
*Knutson, Robt	Inst. in Man. Training, Brookings
Lanphier, Eva (Muessing)	Montevideo, Minn.
Laxson, Leroy	Farmer, Hoven
Lynch, Edw.	Asst. in Dairying, S. D. S. C.
Lynch, Ruth	Instr. in Home Economics, Pierre
Matson, Mamie	Instr. in Junior College, Evansville, Wis.
Miller, Harold, Medical Student, Tulane University	
	629 Lowerline, New Orleans, La.
Mills, Erma Davis	Brookings
Nelson, Lewis E.	Instr. in Science and Athletic Coach, Brookings
Peterson, Harold, Electrician	
	With Westinghouse Mfg. Co., Wilkinsburg, Pa.
Rishoi, Alfred	Asst. State Dairy Inspector, Brookings
*Rowe, Chas.	Brookings
Rowe, Nellie	Instr. Home Economics, Purdue University
Schlatter, Chas. F.	Prof. of Commercial Science, S. D. S. C.
Sheehan, Bernard F.	Instr. in Agronomy, Ore. Agr. Col., Corvallis
Slaatta, Emma	Instr. in Home Economics, Springfield, Minn.
Sloan, Janet	Instr. in English, Castlewood
Smith, Homer	Asst. Boys and Girls Clubs, Rapid City

Waltner, Benj. P. ....	Co. Agr. Agt., Jackson, Minn.
*Warner, Harry .....	DeSmet
*Weber, Geo. ....	Alexandria
*Wing, Leshar, Electrician .....	Beulah, Wyo.

### PHARMACY GRADUATES

*Anderson, A. Edward .....	Watertown
*Burton, Starling .....	Yankton
*Corkhill, Clifford .....	Hurley
*Hemingway, Robt. W. ....	Mattoon, Wis.
Langdon, Hazel (Nelson) .....	Brookings
Lenocker, Paul .....	Pharmacist, 256 Valeria St., Fresno, Cal.
*Peterson, Edw. ....	Viborg
Rasmussen, Ethel .....	Pharmacist, Watertown
Tabor, Floyd .....	Pharmacist, Mitchell

### Class of 1917.

### MASTER OF SCIENCE

Lynch, Arthur D. ....	Creamery Manager, East Berkshire, Vt.
Serles, Earl .....	Prof. of Pharmacy, S. D. S. C.
Whitehead, Lindsey W. ....	Instructor Civ. Eng., State College, Pa.

### BACHELOR OF SCIENCE

Ainsworth, Ernest C. ...	Instr. in Dairying, Iowa State College, Ames
Anderson, Eldon C. ....	Co. Emer. Agt., Clear Lake
Anderson, O. Leon .....	Co. Agr. Agt., Philip
Bennett, Lyle L. ....	P. G. Student, S. D. S. C.
Browning, Lenore .....	Instr. Modern Languages, Mandan, N. D.
*Cunningham, Ray C. ....	Conde
Dakin, Norman .....	Asst. Co. Agr. Agt., Wessington Springs
DeGreef, Chas. W. ....	Teacher, Big Stone
Doughty, Walter E. ....	Farmer, White
*Evans, Roy L. ....	Brookings
Furnish, Alta Klare .....	Teacher, Miles City, Mont.
*Glennon, Daniel C. ....	Huron
Gregory, Eva (Hill) .....	Alexandria
Heiser, Elizabeth ...	P. G. Student in History, U. of Nebraska, Lincoln
Hill, Joe .....	Farmer, Alexandria
Holliday, Faye E. ....	Instr. in Home Economics, Arlington
*Jennings, Hollace H. ....	Estelline
*Johnson, Ralph J. ....	Hetland
*Jones, Horace M. ....	Mitchell
*Karlstad, Chas. H. ....	Dempster
Keating, Pearl .....	Instr. in Man. Training, Big Stone
Kopperud, Harmon .....	Emer. Food Agt., Watertown
Lanphier, Harriet .....	Instr. in Home Economics, Montevideo, Minn.

Lee, Vera M. ....	Instr. in Home Economics, Neola, Ia.
*McCoy, Dell H. ....	Miller
*Malone, Robert S. ....	Huron
Miller, Henry J., Electrical Engineer, 21 Ferry St., Schenectady, N. Y.	
*Miller, Omer ....	Wall
Morgan, Della ....	Prin. Industrial High School, Bath
Langdon, Hazel (Nelson) ....	Brookings
Nickerson, Mary S. ....	Pharmacist, 200 N. 16th St., Portland, Ore.
Nord, Daisy ....	Instr. in English, Arlington
Peterson, Axel ....	Instr. in Agr., Dassel, Minn.
*Rudd, Chas. ....	Miller
Chappell, Mabel (Safford) ....	Aberdeen
Severson, Florence (Ashbaugh) ....	Brookings
Shaw, Happy ....	Instr. in Home Economics, Anamoose, N. D.
Sherwood, Aubrey ....	Entomologist in Extension Work, Brookings
Skinner, Cecil ....	Farmer, Bruce
*Smith, Harry A. ....	Miller
Stoddart, Mattie M. ....	Instr. Home Economics, Elgin, Minn.
Swenehart, Millie (Carley) ....	Embarras, Wis.
*Swift, Eugene ....	Brookings
Wagner, Colman H. ....	Co. Agr. Agt., Selby
Waltner, Adolph L. ....	Farmer, Freeman
Waltner, Caroline A. ....	
.....	Instr. Home Economics, Freeman Academy, Freeman
Wattson, Donald A. ....	Beef Cattle Specialist, Gainesville, Fla.
Westgate, Louis A. ....	Instr. in Agr., Sutherland, Ia.
Winright, Geo. ....	Asst. in Agronomy, S. D. S. C.
Ziegler, Arlene ....	Instr. Home Economics, Dell Rapids

### PHARMACY GRADUATES

Bissell, Wm. E. ....	Druggist, Plankinton
*Dahl, Clarence A. ....	Langford
Ford, Lucile ....	Pharmacist, Irene
Holzman, Arthur J. ....	Pharmacist, Marvin
Nickerson, Mary S. ....	Pharmacist, 200 N. 16th St., Portland, Ore.
*Overturf, Wm. M. ....	Doland
Rottluff, Karl ....	Pharmacist, Sioux Falls
*Sanders, B. Harry ....	Garretson
*Thompson, Albert M. ....	Bruee
Walpole, Robert E. ....	Pharmacist, Hurley

# Student List

## POST-GRADUATE.

Name.	Course.	Home.
Bennett, Lyle L. ....	G. S. ....	Canton
Knutson, Robert ....	Dairy ....	Brookings
Lynch, Edward ....	Dairy ....	Brookings
Rowe, Charles ....	Chemistry ....	Brookings
Winright, George ....	Agronomy ....	Alexandria

## SENIORS.

Ahlers, Naomi ....	G. S. ....	Webster
Beals, Edna ....	H. E. ....	Brookings
Berglind, Axel ....	Agr. ....	Brookings
Blakely, Clifford ....	G. S. ....	Brookings
Boswell, Mildred ....	H. E. ....	Castlewood
Caldwell, Jessie ....	H. E. ....	Brookings
Crofoot, Vanita ....	H. E. ....	Webster
Dewing, Sara ....	H. E. ....	Brookings
Dokter, Garrett ....	Agr. ....	Andover
Evans, Margarette ....	H. E. ....	Brookings
Frease, Hazel ....	H. E. ....	Brookings
Frease, Kathryn ....	H. E. ....	Brookings
Gilbert, Charles J. ....	Agr. ....	Clark
Goddard, Bertin ....	G. S. ....	Hot Springs
Gretschmann, Anna ....	H. E. ....	Springfield
Grinols, Mavis ....	H. E. ....	Brookings
Grinols, Violet ....	G. S. ....	Brookings
Hanson, Hazel ....	G. S. ....	Brookings
Hewett, Howard ....	Agr. ....	Arlington
Hoon, Glenn ....	Agr. ....	Kadoka
Hoover, Harold ....	Agr. ....	Brookings
Hutchinson, Ethel ....	H. E. ....	Webster
Hyde, G. Hara ....	G. S. ....	Brookings
Johnson, Ira ....	Agr. ....	Miller
King, Gladys ....	H. E. ....	St. Paul, Minn.
Laird, Walter S. ....	E. E. ....	Salem
Layson, Stanley V. ....	Agr. ....	Millersburg, Ky.
Lothrop, Orlin ....	E. E. ....	Academy
McFadden, Edgar ....	Agr. ....	Webster
Miller, Arthur ....	Agr. ....	Madison
Mills, Oscar ....	Agr. ....	Wall
Pickett, H. Hubble ....	C. E. ....	Brookings
Pier, Lenora ....	H. E. ....	Woonsocket



Randall, Elizabeth	H. E.	Brookings
Reid, Phyllis	H. E.	Castlewood
Revell, James	Agr.	Brookings
Rilling, Elsie	H. E.	Brookings
Riis, Jens	Agr.	Brookings
Simons, Stella	H. E.	Castlewood
Stevens, Florence	H. E.	Redfield
Tompkins, Arthur	Agr.	Brookings
Urton, J. Raymond	Agr.	Fulton
Ustrud, Ida	H. E.	Watertown
Webb, Grace	G. S.	Arlington

## JUNIORS.

Aldrich, Dorothy	G. S.	Big Stone
Atkinson, Ray	G. S.	Brookings
Austin, Guy	Agr.	Brookings
Bacon, Lulu	H. E.	Gettysburg
Bastian, Elias D.	Agr.	Frankfort
Batien, Anna	H. E.	Clark
Bentley, Norma	H. E.	Rapid City
Bergeim, Frank	G. S.	Brookings
Brenner, Ivan	Agr.	Canton
Brown, Cecil	Agr.	Brookings
Browning, Albert	Agr.	Hot Springs
Bryant, Gladys	H. E.	Andover
Bucholz, Rudolph	Agr.	Brookings
Clark, Gladys	H. E.	Wessington Springs
Cordiner, Waneta	H. E.	Clear Lake
Daniels, Blair	H. E.	Ipswich
Danielson, Percy W.	Agr.	Hendricks, Minn.
Faulkner, Drew	E. E.	Burkmere
Fenn, Leonard	Agr.	Brookings
Frank, H. Clifton	G. S.	Brookings
Green, Carroll	G. S.	Brookings
Halvorson, Harry	Agr.	Brookings
Harvey, James M.	Agr.	Madison
Hast, Sidonia	H. E.	Bruce
Hurlbert, Roy	Agr.	Raymond
Hutchinson, Florice	H. E.	Webster
Hutton, Lynn	Agr.	Egan
Irish, Edith (Severson)	G. S.	Brookings
Jackson, Clark	G. S.	Dell Rapids
Johnson, Gustaf	Agr.	Lake Norden
Kirk, Louise	H. E.	Springfield
Langdon, Floyd	Agr.	Clear Lake
Lyons, Robert	Agr.	Vermillion
McDougall, Portia	G. S.	Britton

Millett, Helen	M. E.	Ft. Pierre
Morris, Margery	H. E.	Ipswich
Morton, Joy	H. E.	Brookings
Nelson, Edmund	Agr.	Estelline
Oertli, Ralph	Agr.	Raymond, N. D.
Peterson, Ruth	G. S.	Brookings
Randall, Pearl	H. E.	Brookings
Reedy, Ernest	Agr.	Beresford
Robbins, Walter	Agr.	Carthage
Saum, Donald	M. E.	Brookings
Seubert, Wilbur	Agr.	Brookings
Skiff, Hazel	G. S.	Brookings
Smith, Alida	H. E.	Clark
Somers, Esther	H. E.	Brookings
Spurling, Dorothy	H. E.	Brookings
Valentine, George	Agr.	White
Walseth, Edwin	Agr.	Clear Lake
White, Helen	G. S.	Woonsocket
White, Malcolm	G. S.	Brookings
Wiles, Glenn	E. E.	Trent
Williams, Clayton	E. E.	Lake Preston
Wilson, Bliss	Py.	Frankfort
Yeamans, Bessie	H. E.	Vienna

## SOPHOMORES.

Anderson, Alvia	H. E.	Brookings
Arneson, Anna	H. E.	Garretson
Atwater, Effie	H. E.	Redfield
Baker, Frances	H. E.	Brookings
Bickel, Eva	H. E.	Watertown
Biggar, George	Agr.	Brookings
Bittner, Albert	Py.	Chelsea
Bottum, George	G. S.	Tulare
Caldwell, Genevieve	H. E.	Brookings
Chase, Elizabeth	H. E.	Brookings
Campbell, Horace	Agr.	Rochester, Minn.
Chappell, Genevieve	H. E.	Brookings
Chenoweth, Grace	H. E.	Brookings
Clark, Velda	G. S.	Wessington Springs
Colfix, Marie	H. E.	Fulton
Culhane, Charles	Agr.	Brookings
Curtis, Gertrude	H. E.	Lead
Dalthorp, Charles	G. S.	Volga
Danielson, Sidney	Agr.	Hendricks, Minn.
Day, Helen	H. E.	Clark
Doolittle, Edith	H. E.	Ipswich
Faulkner, James	C. E.	Burkmere

Flittie, Agnes	H. E.	Brookings
Gardner, Richard	Agr.	Sioux Falls
Gilkerson, David	Agr.	Armour
Graves, Charles	Agr.	Ashton
Haahr, Erwin	E. E.	Sioux Falls
Hansen, Eva	H. E.	Brookings
Hansen, Ross P.	E. E.	Brookings
Hartung, Ralph	Agr.	McLaughlin
Haynes, A. L.	Agr.	Brookings
Haynes, Mrs. Grace	H. E.	Brookings
Headley, John	G. S.	Menno
Hermanson, Peter	G. S.	Tyler, Minn.
Huchindorf, Ina	H. E.	Brookings
Huntimer, Marie	H. E.	Colton
Irish, Marguerite	G. S.	St. Louis, Mo.
Johnson, James	C. E.	Pierpont
Johnson, Oreat	H. E.	Brookings
Johnston, Helen	H. E.	Quinn
Keck, Myrtle	H. E.	Brookings
Lanphier, Grace	H. E.	Milbank
Lorshbough, Mabel	H. E.	Clark
Metzger, Roy	Agr.	Tyndall
Morrow, Madge	H. E.	Brookings
Munro, Carol	H. E.	Wilmot
Nesseth, Minda	G. S.	Menomonie, Wis.
Neville, Earl	E. E.	Warner
Nielsen, Arthur	Py.	Rapid City
Noonan, Genevieve	H. E.	Frankfort
Olson, Angie	H. E.	Brookings
Olson, Clarence	Agr.	Brookings
Onstine, Everett	Agr.	Flandreau
Peck, Clifford	Agr.	Hazel
Peddicord, Susie	H. E.	Brookings
Redmond, Max	Agr.	Redfield
Rohrbach, Grace	H. E.	Clark
Roos, John	Py.	Tulare
Sacre, Carl	Agr.	Interior
Sayler, Charles	Agr.	Mt. Vernon
Sheldon, Rachel	H. E.	Brookings
Sletten, Athony	Py.	Canton
Sloan, Grace	H. E.	Brookings
Solberg, Harry	M. E.	Brookings
Street, Thomas M.	Agr.	Albee
Stumley, Alfred	Agr.	Volga
Swift, Cecile	H. E.	Brookings
Tarbell, Sarah	H. E.	Watertown

Tompkins, Blanche	H. E.	Brookings
Trenner, Ephraim	Agr.	Cash
Troyer, John A.	Agr.	Lennox
Trumm, Archie	Py.	Hayti
Underwood, Paul	Agr.	Willow Lakes
Vollmer, Louis	E. E.	Brentford
Walseth, Russell	Agr.	Clear Lake
Waters, Harley	E. E.	Wentworth

## FRESHMEN.

Allison, Andrew	G. S.	Brookings
Allison, Ruth	H. E.	Sioux Falls
Anderson, Einar	G. S.	Brookings
Anderson, Glenn	Py.	Watertown
Andrews, Worley	Py.	Highmore
Arndt, Herbert	E. E.	Leola
Avery, Glenn	Agr.	Alexandria
Bakke, Josie	H. E.	Howard
Baird, Marguerite	Py.	Gettysburg
Bangs, Frances	H. E.	Huron
Baxter, Ruth	G. S.	Hazel
Beals, Daniel	Agr.	Brookings
Beckler, Ethel	H. E.	Ft. Pierre
Bjorge, Aslaug	Py.	Brookings
Boorman, W. Holley	Sec.	Howard
Borst, Evan	G. S.	Brookings
Buck, Bonnie	G. S.	Bruce
Bulger, Raymond	G. S.	White
Burdett, William	Agr.	Brookings
Burge, Violet	H. E.	Castlewood
Burkhart, Lyle	Agr.	Dixon
Campbell, Grace	Sec.	Gettysburg
Carlisle, Marion	G. S.	Brookings
Chase, Marcus	C. E.	Brookings
Chrstianson, Mabel	Py.	Watertown
Connelly, Emma	Py.	Browns Valley, Minn.
Dahl, Paul C.	G. S.	Lake Preston
Davies, Ross	Agr.	Lead
Davis, Guy	G. S.	Brookings
DeBoer, Dewey	C. E.	Corsica
Doner, David	G. S.	Brookings
Dunster, Corlie	H. E.	Egan
Dye, Emmett C.	C. E.	Richards
Eberlein, Clara	H. E.	Aurora
Elliott, Warren G.	Py.	Brookings
Erickson, Dewey	E. E.	Osakis, Minn.
Erie, Frances	H. E.	Brookings

Evans, William	E. E.	Flandreau
Fjerstad, Elmer	Py.	Estelline
Flett, Louise	H. E.	Milbank
Gerber, Neal	C. E.	Worthing
Gilbert, Arthur	Sec.	Buffalo
Gilbertson, Gilbert	Agr.	Brookings
Goodhue, Anna	H. E.	Frankfort
Gould, Lillian	H. E.	Springfield, Minn.
Gretschmann, Esther	G. S.	Springfield, S. D.
Griffith, Mibra	Agr.	Cresbard
Handwerk, Gertrude	G. S.	Brookings
Hansen, Esther	G. S.	Redfield
Hast, Mary	H. E.	Bruce
Helgersen, Arthur	C. E.	Canton
Henry, Lloyd	G. S.	Volga
Hepner, George	G. S.	Brookings
Hepperle, Fred J.	E. E.	Leola
Heymer, J. Karl	C. E.	Brookings
Hipple, Robert	Agr.	Pierre
Hobbs, Oscar	E. E.	White Lake
Holm, Margry J.	G. S.	Webster
Holmes, Eva	H. E.	Brookings
Horkey, William	E. E.	Tyndall
Hutchinson, Hazel	H. E.	Webster
Hutton, Paul	Agr.	Egan
Hyde, Scott	Py.	Webster
Irish, Esther	H. E.	Brookings
Iverson, Selma	Sec.	Brookings
Johnson, Palmer	G. S.	Brookings
Jones, Otho J.	Agr.	Frankfort
Keating, Walter	E. E.	DeSmet
Keith, Florence	H. E.	Brookings
Kelley, Robert	M. E.	Flandreau
Kennard, Elmer	Agr.	Brookings
Klucas, Roderick	G. S.	Benson
Knappen, Marshall	G. S.	Brookings
Knutson, Wilma	H. E.	Brookings
Krause, Chester	G. S.	Flandreau
Kurtz, William	C. E.	Bushnell
Lark, George	Agr.	DeSmet
Leavitt, Donald	C. E.	Worthing
Lee, Irwin	G. S.	Volga
Locke, Gladys	H. E.	Sherman
Lockwood, Howard	Agr.	Chamberlain
Luebke, Violette	H. E.	Castlewood
McKillop, Myrtle	H. E.	Canistota



McKillop, Frank	E. E.	Canistota
McLaren, Walter	G. S.	Flandreau
Madsen, Mars	Py.	Viborg
Mall, Helen	H. E.	Brookings
Mann, Frank	E. E.	Brentford
Marshman, Grace	Sec.	Brookings
Metzger, Edward	Agr.	Tyndall
Merriman, Grace	H. E.	Carpenter
Millett, Paul	Agr.	Ft. Pierre
Mitchell, Gertrude	G. S.	Watertown
Myers, Kenneth	Agr.	Newton, Ia.
Nord, Alfred	G. S.	Milbank
Odland, Arthur	G. S.	Hurley
Paulsen, Joseph	Agr.	Brandt
Pepple, Erma	G. S.	Brookings
Rayburn, Mildred	Sec.	Keokuk, Ia.
Ritzman, Leon D.	Agr.	Canova
Robinson, Edna	H. E.	Brookings
Rowe, Ernest	C. E.	Canton
Saltmarsh, Mae	G. S.	Miller
Scallin, J. Carlos	M. E.	Mitchell
Senn, Albert E.	E. E.	Deadwood
Senter, Roy	E. E.	Winfred
Sievers, George	C. E.	Wessington
Sloat, Ora	H. E.	Gettysburg
Smith, Alda C.	H. E.	Castlewood
Smith, Harold	Agr.	Spearfish
Steele, Nellie D.	Py.	White Rock
Sterr, Lura	H. E.	De Smet
Stockstad, Alvin	G. S.	Volga
Styles, Arnold	Agr.	Brentford
Sutherland, Lloyd E.	Sec.	Pringle
Thompson, Bertram P.	Agr.	Alexandria
Thompson, Lester R.	Agr.	Artesian
Thurston, Ralph H.	Agr.	Sisseton
Tommerraason, Otto	E. E.	Madison
Towers, Ralph E.	G. S.	Clear Lake
Urton, Harold E.	Agr.	Fulton
Utterback, Ernest	Agr.	Huron
Vearrier, Gladys	H. E.	Virgil
Vearrier, Maude	H. E.	Virgil
Vera, Genaro	Agr.	Cochabamba, Bolivia
Waalkes, Grace	Sec.	Brookings
Walradth, Merle	E. E.	White
Walton, Zenobia	G. S.	Castlewood
Wangsness, Paul H.	Py.	Garretson

Wexler, Max .....	Py. ....	Brookings
Woodward, Neva .....	H. E. ....	Brookings
Wooley, Alma .....	H. E. ....	Highmore
Ziegler, Pearl .....	H. E. ....	Brookings
Ziegler, Richard .....	Agr. ....	Brookings

## SPECIALS.

Atkinson, Roger .....	Music .....	Brookings
Bailey, Vena .....	Music .....	Lake Preston
Bailey, Vera .....	Music .....	Lake Preston
Bartelt, Bernice .....	Music .....	Brookings
Bartlett, Evelyn .....	Music .....	Brookings
Benson, Reuben .....	Music .....	Brookings
Binniewies, Mrs. Ina .....	Music .....	Brookings
Blakely, Mrs. Gladys .....	Art .....	Brookings
Brown, Florence .....	Music .....	Brookings
Christensen, Leona .....	Music .....	Brookings
Clemenson, Milo .....	Music .....	Brookings
Cole, Olive .....	Music .....	Brookings
Cook, Minnie .....	Music .....	Beltrami, Minn.
Cross, Lucile .....	Music .....	Brookings
Dunbar, Gwendolyn .....	Music .....	Brookings
Erickson, Alma .....	Music .....	Astoria
Fishback, Mrs. Van .....	Music .....	Brookings
Gamble, Dale .....	Music .....	Brookings
Gates, Mary .....	Music .....	Brookings
Geyer, Mary .....	Music .....	Brookings
Gilbertson, Mary .....	Art .....	Brookings
Hanson, Lola .....	Music .....	Canton
Hanson, Thelma .....	Music .....	Canton
Haroldson, Gale .....	Music .....	Brookings
Hargett, Audree .....	Music .....	Brookings
Hargett, Mary .....	Music .....	Brookings
Hedge, Winifred .....	Music .....	Brookings
Horton, Ralph .....	Music .....	Volga
Hoy, Marguerite .....	Music .....	Brookings
Hume, Albert .....	Music .....	Brookings
Hutton, Helma .....	Music .....	Brookings
Johnson, Ethel .....	G. S. ....	Brookings
Mahany, Max .....	Music .....	Brookings
Mast, Wallace .....	Music .....	Brookings
Mast, William .....	Music .....	Brookings
Martin, Lois .....	Music .....	Brookings
Mathews, Hermine .....	Music .....	Brookings
Mathews, Mrs. Mabel .....	G. S. ....	Brookings
Mathews, Zoa .....	Music .....	Brookings
Nelson, Agnes .....	H. E. ....	Litchfield, Minn.

Nelson, Mrs. Rena	G. S.	Brookings
Odegard, Theodore	Music	Brookings
Peterson, Harriet	Music	Brookings
Reinicke, Irene	Music	Brookings
Reinicke, Vera	Music	Brookings
Rowe, Belle	Music	Brookings
Rude, Evelyn	Music	Brookings
Rude, Minnie	Music	Brookings
Sexauer, Verna	Music	Brookings
Shaw, Benjamin F.	G. S.	Carthage
Smith, Byrne	Music	Brookings
Smith, Mrs. C. W.	Music	Brookings
Smith, Duane	Music	Brookings
Tofte, Edward	Music	Brookings
Whitehead, Lindel	Music	Brookings

#### PREPARATORY IV

Alton, John	Brookings
Gray, Eugene	Menomonie, Wis.
Corbin, Robert	Brookings
Forsee, Zeta	Brookings
Douthitt, Maurice	Big Stone
Halverson, Walter	Brandt
Houghton, Westina	Brookings
Janssen, George	Castlewood
Kopland, David	Brookings
Mitchell, Anna W.	Watertown
Rothschild, Donald	Madison
Sculley, Jesse	West Frankfort, Ill.
Seagreen, Olive	Turton
Wright, Pearl	Aurora

#### PREPARATORY III

Blakeslee, Charles	Brookings
Carson, Donald	Bradley
Enke, Rosa	Verdi, Minn.
Erickson, Vernon	Beresford
Glood, Vern J.	Viborg
Greenley, Jennie	Brookings
Halverson, Gerhard	Brandt
Hanson, Peter	Brookings
Holtey, Alfred	Hendricks, Minn.
Knudson, Sigurd	Carthage
Laddusaw, Blanche	Brookings
Lawson, Harold	Tulare
Long, Jessie	Webster
Nelson, Margaret	Viborg
Shabram, Arthur	Oelrichs

**PREPARATORY II**

Andrews, Arthur .....	Colton
Clark, Gertrude .....	Brookings
Eberhard, Wesley .....	Lane
Forby, Ellis H. ....	Onaka
Hammerbacher, Ogden .....	Webster
Kapaun, Beryl .....	Brookings
Krogh, Alvira .....	Brookings
Lawrence, James .....	Yale
Mullen, Daniel .....	White River

**PREPARATORY I**

Annis, Charles .....	Wessington Springs
Beehner, Gertrude .....	Elkton
Bush, Harley .....	Colome
Christopherson, Evelyn .....	Brookings
Cochran, Baven .....	Brookings
Dawson, Willis .....	Colton
Dreyer, Edward .....	Brookings
Druse, Elmer .....	Woonsocket
Dye, Lynette .....	Richards
Elshire, Clifford .....	Hardingrove
Erb, Millard .....	Brookings
Fogerty, Florence .....	Brookings
Hannon, Thomas .....	Brookings
Heglie, John .....	Sisseton
Hjelle, John .....	Colton
Johnson, Minerva .....	Hammer
Jones, Gilbert .....	Ipswich
Kapaun, Theodore .....	Brookings
Kinyon, John .....	Pierre
Konstant, Martin .....	Marvin
Laddusaw, Lois .....	Brookings
Lebedoff, John .....	Fredonia
Mair, Catherine .....	Brookings
Olson, Luella .....	Brookings
Peterson, Nellie .....	Midland
Reents, Stella .....	Milbank
Richards, Elma .....	Belle Fourche
Richards, Harold .....	Belle Fourche
Smiley, Guy .....	Garland
Sterr, Rena .....	De Smet
Thayer, Marjory .....	Brookings
Thompson, Alma .....	Brookings
Walton, Susie .....	Hitchcock
Wilensky, Abraham .....	Sioux City, Ia.

Wold, Mabel .....	Brookings
Woodward, Ira .....	Brookings
Zielsky, Lillian .....	South Shore

## MUSIC STUDENTS.

Aldrich, Dorothy .....	Voice, Piano .....	Big Stone
Allison, Ruth .....	Piano .....	Sioux Falls
Anderson, Harry .....	Violin .....	Montrose
Anderson, Thyra .....	Voice .....	Hetland
Arndt, Herbert .....	Cornet .....	Leola
Arneson, Anna .....	Voice .....	Garretson
Atkinson, Roger .....	Violin .....	Brookings
Atkinson, Ruth .....	Piano .....	Brookings
Bailey, Vena .....	Cornet .....	Lake Preston
Bailey, Vera .....	Violin .....	Lake Preston
Bakke, Josie .....	Voice, Piano .....	Howard
Bartelt, Bernice .....	Piano .....	Brookings
Bartlett, Evelyn .....	Violin .....	Brookings
Baxter, John W. ....	Violin .....	Hazel
Baxter, Ruth .....	Voice, Piano .....	Hazel
Benson, Reuben .....	Piano .....	Brookings
Binnewies, Mrs. Ina .....	Piano, Voice .....	Brookings
Brenner, Ivan .....	Voice, Piano .....	Canton
Brown, Florence .....	Piano .....	Brookings
Campbell, Grace .....	Piano .....	Gettysburg
Carlisle, Marlon .....	Piano .....	Brookings
Carson, Donald .....	Piccolo .....	Bradley
Christensen, Leona .....	Piano .....	Brookings
Clark, Velda .....	Piano, Voice....	Wessington Springs
Clemenson, Milo .....	Saxophone .....	Brookings
Close, Grant .....	Voice .....	White Lake
Colfix, Marie .....	Voice .....	Fulton
Cook, Minnie .....	Piano .....	Beltrami, Minn.
Cross, Lucille .....	Piano, Voice .....	Brookings
Daker, Mildred .....	Piano .....	Houghton
Daniels, Blair .....	Piano .....	Ipswich
De Remer, Edna .....	Piano .....	Hawarden, Ia.
De Remer, Robert .....	Voice, Violin .....	Hawarden, Ia.
Dewitte, Ellsworth .....	Clarinet .....	Holabird
Dunbar, Gwendolyn .....	Piano .....	Brookings
Dunster, Corlie .....	Piano .....	Egan
Dye, Lynette .....	Piano .....	Richards
Ellingsson, Idor .....	Violin .....	Flandreau
Ellis, Albert .....	Violin .....	Elrod
Erickson, Alma .....	Piano, Voice .....	Astoria
Erie, Frances .....	Piano .....	Brookings



Evans, William	Voice	Flandreau
Feind, Ernest	Cornet	Hazel
Fishback, Mrs. Van D.	Piano	Brookings
Fjerstad, Elmer	Cornet	Estelline
Forsberg, Clinton	Voice	Canova
Freasa, Hazel	Voice	Brookings
Gamble, Dale	Cornet	Brookings
Gates, Mary	Piano, Violin	Brookings
Geyer, Mary	Voice	Brookings
Gilbert, Charles	Voice	Clark
Goodhue, Anna	Piano	Frankfort
Gray, Eugene	Voice	Menomonie, Wis.
Gretschmann, Anna	Piano	Springfield
Gretschmann, Esther	Voice	Springfield
Griffith, Mibra	Saxophone	Cresbard
Handwerk, Gertrude	Voice	Brookings
Hanson, Esther	Piano	Brookings
Hanson, Lola	Voice	Canton
Hanson, Thelma	Voice	Canton
Hargett, Audree	Piano	Brookings
Hargett, Mary	Piano	Brookings
Haroldson, Gale	Piano	Brookings
Hedge, Winifred	Piano	Brookings
Hewett, Howard	Saxophone	Arlington
Hipple, Robert	Voice	Pierre
Hiscox, Faye	Piano	Montrose
Hjelle, John	Clarinet	Colton
Holm, Margary	Voice	Webster
Horton, Ralph	Voice	Volga
Houghton, Westina	Piano	Brookings
Hoy, Marguerite	Piano	Brookings
Hume, Albert	Violin	Brookings
Hutchinson, Ethel	Piano	Webster
Hutton, Helma	Piano	Brookings
Hyde, Scott	Flute	Webster
Iverson, Mary	Violin	Brookings
Johnson, Ethel	Piano	Brookings
Johnson, Ira	Voice	Miller
Johnson, Minerva	Piano	Brookings
Jones, Gilbert	Voice, Violin, Piano	Ipswich
Jones, Raymond	Violin	St. Lawrence
Keating, Walter	Flute	DeSmet
Keith, Florence	Voice, Piano	Brookings
Keith, Mark	Trombone	Brookings
Konstant, Martin	Violin	Marvin
Krause, Chester	Clarinet	Flandreau

Kuehl, Adolph	Cornet	Yale
Locke, Gladys	Voice	Sherman
Lunda, Leonard	Violin	Chancellor
McDougall, Portia	Piano	Britton
McKillop, Myrtle	Voice	Canistota
Mack, Henry P.	Violin	Castlewood
Mahany, Max	Piano	Brookings
Mall, Helen	Piano	Brookings
Martin, Lois	Piano	Brookings
Mast, Wallace	Piano	Brookings
Mast, William	Piano	Brookings
Mathews, Hermine	Piano	Brookings
Mathews, Zoa	Piano	Brookings
Millett, Helen	Voice	Ft. Pierre
Mitchell, Gertrude	Violin	Watertown
Morton, Joy	Piano	Brookings
Nelson, Margaret	Piano	Viborg
Noonan, Genevieve	Piano	Frankfort
Nord, Oscar	Trombone	Milbank
Odeggaard, Theodore	Violin	Brookings
Paulson, Signus	Cornet	Lily
Peddicord, Susie	Voice	Brookings
Peppers, Gale	Violin	Groton
Peterson, Harrite	Piano	Brookings
Pier, Lenora	Voice	Woonsocket
Reentz, Stella	Piano	Milbank
Reinicke, Irene	Piano	Brookings
Reinicke, Vera	Piano	Brookings
Ritzman, Leon	Baritone	Canova
Rodway, Christian	Cornet	Hudson
Rowe, Belle	Voice	Brookings
Rude, Evelyn	Voice	Brookings
Rude, Minnie	Piano	Brookings
Rufsvold, John	Violin	Fladmoe
Saltmarsh, Mæ	Piano, Trombone	Miller
Sayler, Charles	Piano	Mt. Vernon
Schreiber, Esther	Violin	Agar
Schreiber, Sophia	Piano	Agar
Sexauer, Verna	Piano	Brookings
Skiff, Hazel	Piano	Brookings
Smith, Byrne	Voice	Brookings
Smith, Mrs. C. W.	Voice	Brookings
Smith, Duane	Violin	Brookings
Sterr, Rena	Voice, Piano	De Smet
Thompson, Alma	Piano	Brookings
Tofte, Edward	Violin	Brookings

Urton, J. Raymond	Voice, Saxophone	Fulton
Vearrier, Gladys	Violin	Virgil
Vearrier, Maude	Voice	Virgil
Walton, Susie	Piano	Hitchcock
Walton, Zenobia	Voice, Piano	Castlewood
Webb, Grace	Voice	Renwick, Ia.
Whitehead, Lindel	Piano	Brookings
Wik, Victor	Clarinet	Millard
Wooley, Alma	Voice	Highmore
Wright, Pearl	Piano, Voice	Aurora

## SCHOOL OF AGRICULTURE.

### FOURTH YEAR.

Ackley, Bliss	Bryant
Andrews, Freeman	Marcell, Minn.
Bapp, William E.	White Rock
Bush, Emmit	Colome
Corothers, James	Clear Lake
Flynn, Leo	Montrose
Hanson, Albert	Elk Point
Hoogshagen, William	Parker
Jensen, James	Erwin
Merriman, Arthur	Seim
Neyhart, Erle	Gorman
Peppers, Gale	Groton
Peters, Dorothy	Granville, Iowa
Peterson, P. D.	Virgil
Petry, Kathryn	Hawarden, Iowa
Putzke, Edna	Humboldt
Putzke, Lawrence	Humboldt
Stitt, Harold	Hitchcock
Svenson, Alfred	Ethan
Tate, Chester	Brookings
Tate, May	Brookings
Taylor, Norman	Ft. Pierre

### THIRD YEAR.

Bereman, Miriam	Gary
Carlisle, Agnes	Lake Benton, Minn.
Carson, Charlotte	Bradley
Chicoine, Benjamin	Jefferson
Daker, Paul	Houghton
Fasbender, Leo	Hendricks, Minn.
Hermanson, J. O.	Sherman
Johnson, Eugene	Brookings

Johnson, Florence	Brookings
Keith, Mark	Armour
Kilian, Ward	Vilas
King, Esther	Brookings
Merry, Lyman	Dell Rapids
Moorhouse, Lorenda	Watertown
Morrison, Charlie	South Shore
Nichols, Elva	Westbrook, Minn.
Paulson, Signus	Lily
Piper, Albert	Carpenter
Rebrud, Walter	Ipswich
Schmidt, Fred	Alpena
Segard, Henry	Mission Hill
Walker, Harry	Tripp

## SECOND YEAR.

Aldrich, Merton	Big Stone City
Apland, Ellsworth	Oldham
Beatty, Richard	Elrod
Bentley, Helen	Bryant
Bouzek, Ben	Highmore
Burgi, Carl	Yankton
Chrisler, Claude	Harrisburg
Cook, Donald E.	Plankinton
Crane, Lloyd	Ramona
Crowell, Alfred	Brookings
Daker, Mildred	Houghton
DeReu, Ida	Sherman
DeWitte, Ellsworth	Holabird
Doner, J. Cameron	Gettysburg
Dybdahl, Lillian	Brookings
Ellingson, Idor	Flandreau
Flisrand, William	Florence
Frybarger, John L.	Wayside, Nebraska
Gale, Veo	Farmingdale
Grindberg, Valdine	Trent
Hanson, Carl J.	Lily
Hanson, Victor	Vermillion
Hetland, Conrad	Montrose
Hiscox, Faye	Montrose
Jensen, Corliss	Farmingdale
Johnson, Vera	Balaton, Minn.
Knickrehm, Harry	Carpenter
Longman, Wilford	Toronto
Lunda, Leonard	Chancellor
Lundeen, Florence	Aurora
Lyons, Alvin	Agar

Markve, Carl	Ortley
Parcells, Mabel	Balaton, Minn.
Peterson, Karl	Lily
Powers, Robert	Delmont
Rodway, Christian	Hudson
Rude, Cecelia	Brookings
Rude, Theodore	Brookings
Rudy, Charles	Cavour
Schmidt, Lilly	Alpena
Schreiber, John	Agar
Sckerl, Rudolf	Lake City
Scott, Louis	Lake Andes
Sloat, Everett	Gettysburg
Sloat, Fred	Lowry
Sloat, May	Lowry
Spicer, Lawrence	Wessington
Steen, Edward	Brookings
Stitt, Lyle	Hitchcock
Sundet, Philip	Brookings
Swanson, Chester	Pukwana
Swanson, Otto	Pukwana
Wik, Victor	Millard
Williamson, Clifford	Artesian

### FIRST YEAR.

Alcott, Carroll	Reliance
Anderson, Ernest	Carthage
Anderson, Harry	Montrose
Anderson, Ralph	Irene
Anderson, Sylvia	Viborg
Bakken, John	Bristol
Baxter, John	Hazel
Berg, John	Letcher
Bezner, Edna	Highmore
Eickel, William Everett	Watertown
Brock, Glen	Huron
Brown, Lawrence	Yankton
Bullock, Alex	Onida
Cafferty, John	Faulkton
Callsen, Esther	Lily
Chesky, George	Selby
Chicoine, Donald	Jefferson
Chicoine, Leo	Jefferson
Christensen, Anna	Viborg
Christianson, Esther	Jasper, Minn.
Clipper, Carol	Lake Benton, Minn.
Clipper, Gordon	Lake Benton, Minn.



Close, Grant	White Lake
Coe, Lynn	Vernal
Conger, Rudolph	Lewiston
Cook, Minnie	Beltrami, Minn.
Crain, Clyde	Esmond
Dahl, Ellen	Winfred
Dahl, Henry	Winfred
Dahme, August	Mina
Deiubel, Louis	Crandall
DeRemer, Edna	Hawarden, Iowa
DeRemer, George	Hawarden, Iowa
Dickens, George	Worthing
Eklund, Harold	DeSmet
Ellingson, Carroll	Flandreau
Ellis, Albert	Elrod
Erickson, Clarence	Montrose
Erickson, George	Montrose
Erickson, Harold	Salem
Fedt, Anna	Bryant
Feind, Ernest	Hazel
Ferguson, Frank	Artesian
Flisrand, Arthur	Florence
Flynn, Stephen	Montrose
Forsberg, Clinton	Canova
Fox, Roy	Mitchell
Freeburg, Grace	Carpenter
Fuller, Milo	Owanka
Gerberding, Frank	Bemis
Gilbertz, Mike	White Lake
Green, Max	Hazel
Hagen, Edwin	Sisseton
Hahn, Elmer	Oelrichs
Hansen, Edward	Platte
Harris, George	Winfred
Hattlestad, Theodore	Garretson
Haugan, John	Revillo
Hedeen, Clifford	Beresford
Heeren, Alvin	Dell Rapids
Heeren, Arthur	Dell Rapids
Heeren, Calvin	Dell Rapids
Heeren, Herman	Harrisburg
Henderson, Victoria	Elkton
Hessler, Bertha	Crandall
Hoime, Neva	Sherman
Hollander, Nellie	Artesian
Holliday, Ralph	Brookings
Hollister, Beatrice	Sherman

Hoyme, Rosella	Sherman
Hutton, Helma	Brookings
Iverson, Mary	Henry
Iverson, Milton	Worthing
Jensen, Olga	Renner
Johnson, Frank	Artesian
Johnson, Herman	Colton
Johnson, Wilfred	Volga
Keck, Almer	Brookings
Kittleson, Selma	Henry
Kleinsasser, Mathias	Frankfort
Kotila, Edward	Frederick
Kuehl, Adolf	Yale
Larson, Milo	Mt. Vernon
Lindblom, Guy	Canova
Lindburg, Kenzie	Wagner
Linn, Gene	Brookings
Loen, Lauris	Howard
Lund, Harry	White
McKillop, Donald	Artesian
Magnuson, Arthur	Carthage
Meyer, Albert	Huron
Meyer, Edward	Cavour
Millage, Oscar	Pukwana
Miller, Frank	Chelsea
Mills, Manning	Beebe
Moen, Morris	New Effington
Mogen, Arthur	Summit
Nelson, Ernest	Dell Rapids
Nelson, Harvey	Dell Rapids
Nelson, Martha	Albee
Norman, Hattie	Clear Lake
Olson, Everett	Kirley
Olson, Vernon	Egan
Payne, Harley	Mansfield
Peterson, Rose	Viborg
Petterson, Mabel	Renner
Pierce, Frank	Leola
Pike, Daniel	Sioux Falls
Poppens, Peter	Harrisburg
Quissal, Clara	Bryant
Ranheim, Engvald	Ruthon
Rohrbach, Glenn	Clark
Rude, Grace	Brookings
Rufsvold, John	Fladmoe
Rundell, Merle	Hurley

Schreiber, Esther .....	Agar
Schreiber, Sopha .....	Agar
Sckerl, Herbert .....	Lake City
Shaw, Fred .....	Montrose
Shawver, Keith .....	Wessington Springs
Sigdestad, Selmer .....	Bristol
Sigdestad, Steward .....	Pierpont
Smith, Elsie .....	Carpenter
Stearns, George .....	Canton
Steensland, Ernest .....	Canton
Stoneback, George .....	Harrisburg
Strunk, Elmer .....	Irene
Strunk, Walter .....	Irene
Swenson, Christian .....	Irene
Swenson, Ruth .....	Luverne, Minn.
Thorstensen, Peder .....	Irene
Todd, Florence .....	Canton
Tollefson, Henry .....	Hudson
Urban, Willie .....	Worthing
Valentine, Gertrude .....	White
Williams, Charles .....	Vale
Wolner, Willard .....	Frankfort
Wolner, Oscar .....	Frankfort
Wood, Ray .....	Worthing
Worden, Silas .....	Brookings
Wright, Warren .....	Valley Springs

## SUMMER SCHOOL.

1917

Albrecht, Else Johana .....	De Smet
Alexander, Bernice .....	Heron Lake, Minn.
Anderson, Eldon .....	Pierre
Anderson, Helga .....	Brookings
Anderson, Leon .....	Rapid City
Anderson, Lillian .....	Hayti
Anderson, Mildreth .....	Castlewood
Andrews, Walter .....	De Smet
Austin, Ethel .....	Brookings
Bailey, Ethelyn .....	Lake Preston
Bakke, Josie .....	Howard
Bamsey, Mae .....	Howard
Barfoot, Edith .....	Roswell
Barry, John D. ....	Wessington
Beals, Edna .....	Brookings
Beath, Ethel .....	Watertown

Beckler, Ethel	Ft. Pierre
Bentsen, Aksel	Wagner
Bergeim, Joseph	Brookings
Berglind, Axel	Brookings
Bickel, Eva	Watertown
Bickel, Gladys	Watertown
Blakely, Mary	Brookings
Blakeslee, Mabel	Brookings
Bogstie, Emma	Brookings
Bowles, Claire	St. Lawrence
Bredesen, Marie	Brookings
Brown, Elizabeth	Brookings
Brown, Ernest	Aurora
Brown, F. Gertrude	Elkton
Bryant, Elizabeth	Brookings
Bucholz, Gustav	Estelline
Bulger, Jacob	White
Caldwell, Genevieve	Brookings
Caldwell, Jessie	Brookings
Caldwell, Kate	Brookings
Calkins, Herbert	Bemis
Chenoweth, Grace	Brookings
Christofferson, Anna	Lake Preston
Clark, Esther	Faulkton
Clinesmith, Abbie	Sioux Falls
Crawford, Glen	Watertown
Crawford, R. H.	Watertown
Crofoot, Vanita	Webster
Daily, Gladys	Watertown
Daniels, Blair	Ipswich
Davis, Sybil	Litchfield, Minn.
Dike, L. A.	Britton
Doner, David	Brookings
Driver, Marion	De Smet
Eberlein, Clara	Aurora
Eidsness, Hilda	Hazel
Emly, Andy J.	Brookings
Erickson, Henry	Florence
Erickson, Otto	Arlington
Fasbender, Veronica	Hendricks, Minn.
Feathers, Carol	Carthage
Fryer, Florence	Doland
Gageby, Charlotte	Elkton
Gates, C. E.	Kensal, N. D.
Gehm, Alma	De Smet
Gibbs, Olive C.	Hetland

Gilbertson, Grace	Lone Rock, Wis.
Gilbertson, Gurina	Brookings
Gilbertson, Mary	Brookings
Gilmore, Mary	Erwin
Glennon, Dan C.	Huron
Goldbeck, Florence	Clear Lake
Graber, Jacob	Freeman
Greenley, Jennie	Brookings
Greenley, Alda	Brookings
Halverson, Alma	Brookings
Hansen, Marguerite	Flandreau
Hansen, Ross P.	Withee, Wis.
Hawes, Belle	Sherman
Hawes, Hazel	Sherman
Haynes, A. L.	Brookings
Heaton, Guy	Gary
Heitland, Kate	Wolsey
Heslop, Leroy	Britton
Heusinkveld, Zilda	Maurice, Ia.
Hill, Gertrude	Central City
Hinkley, F.	Britton
Hoffmann, Nellie	Vienna
Holliday, Lloyd	Brookings
Hotchkiss, Wm. H.	Brookings
Hutton, Helma L.	Brookings
Inhofer, Alice	Elkton
Innes, Clayton	Brookings
Irish, Edith	Brookings
Jarman, Mabel	Brookings
Johnson, Carl H.	Manila
Johnson, Ellen H.	Egan
Johnson, Ethel	Brookings
Johnson, Isabel	Litchfield, Minn.
Jorgenson, Mrs. Effie	Hazel
Kazmerzak, Marie	Erwin
Kennard, George B.	Brookings
Kjerpeseth, Emma	Howard
Knutson, Robert	Brookings
Koehn, Eugenie	Elkton
Krumm, Lillian	Bruce
Kuehl, W. A.	Yale
Laddusaw, Blanche	Brookings
Landekil, Hazel	Naples
Lanphier, Harriet	Brookings
Layson, Nellie	Brookings
Layson, Stanley V.	Brookings



Lee, Vera .....	Brookings
Loeck, John .....	Brookings
Long, Jessie .....	Webster
Lynch, Ruth .....	Brookings
McFadden, Edgar .....	Webster
McGill, Blanche .....	Camp Crook
McMahon, Amy .....	Bruce
McMillan, Orville .....	Alpena
Maddock, Lorinda .....	Artesian
Mayland, George .....	Brookings
Marshman, Clinton .....	Brookings
Marshman, Grace .....	Brookings
Mathews, Hubert .....	Brookings
Mathews, Marjory .....	Brookings
Mathews, Zoa .....	Brookings
Merriman, Grace .....	Carpenter
Miller, Arthur E. ....	Madison
Miller, Arthur .....	Estelline
Miller, Harold .....	Brookings
Milne, Rev. M. B. ....	Brookings
Mitchell, Donald E. ....	Brookings
Nelson, Ineta .....	Dell Rapids
Nelson, Junie W. ....	Dell Rapids
Neu, Selma L. ....	De Smet
Ohse, Violet .....	White
Olson, William D. ....	Volga
Parker, Rose .....	Hazel
Patterson, Grace .....	Wentworth
Paulson, Joseph .....	Brandt
Pease, Myrtie .....	Brookings
Peddicord, Helen .....	Brookings
Peddicord, Susie .....	Brookings
Pederson, Ruth .....	Howard
Perrin, Alta .....	Brookings
Peters, Dorothy .....	Granville
Peterson, Ruth .....	Brookings
Pogue, James C. ....	Brookings
Putzke, Edna .....	Humboldt
Radly, Florence .....	Hurley
Richardson, E. L. ....	White
Ridout, Lillian .....	Brookings
Riis, Jens .....	Brookings
Rilling, Harry .....	Brookings
Rogers, Anna M. ....	Wessington
Ronning, Joseph .....	Florence
Rude, Ida .....	Brookings
Sanders, Cecilia .....	Brookings

Sampson, Florence	Elkton
Schultz, Randolph	Aurora
Scully, Jesse	West Frankfort, Ill.
Severson, Lenora	Volga
Shanley, Mrs. Mabel	Brookings
Shaw, Benjamin F.	Carthage
Shearer, Florence	De Smet
Sherwood, Carleton	Clark
Sherwood, Aubrey	Brookings
Sloan, Edith	Brookings
Small, Hanna	Madison
Smith, Byrne	Brookings
Smith, Lillian	Flandreau
Smith, Mae E.	Carthage
Smith, Vivian	Watertown
Spurling, Dorothy	Brookings
Stinehart, Lunetta	Bruce
Stocks, Florence	Lone Rock
Stoddart, Mattie	Brookings
Tarbell, Sarah	Watertown
Tate, Chester	Brookings
Tellinghuisen, W. R.	White
Thom, Minnie M.	Albert Lea, Minn.
Tobin, Esther	Estelline
Tribitt, C. H.	Altamont
Trooein, Mabel K.	Brookings
Turner, W. A.	Britton
Twedt, Winifred	Volga
Tysdal, Mabel	Nisland
Uppendahl, Wm.	White
Vearrier, Maude	Virgil
Voss, Edward	Garvin, Minn.
Waalkes, Grace M.	Brookings
Waterman, Alice	Kansas City, Mo.
Wattson, Donald	Chamberlain
Watznauer, Marie	Artesian
Weber, George	Farmer
Welch, Caryl	Highmore
Westgate, Louis	Brookings
White, H. Dale	Delmont
White, Malcolm	Wessington Springs
Wilcox, Myrtle	Colfax, Ia.
Wilson, Kathleen	Brookings
Winegar, Leah	Brookings
Winright, George	Alexandria
Wood, Laura	Brookings
Woodruff, Victor	Miller

Woodward, Neva .....	Brookings
Zum Brunnen, Hazel .....	Munro, Wis.

## SHORT COURSES.

### CREAMERY—THREE MONTHS.

Beddow, Clifford .....	Armour
Bullock, Albert .....	Onida
Horton, Rolie .....	Owanka
Jensen, Jens K. ....	Brookings
Jensen, Lars .....	Aberdeen
Lebedoff, John .....	Fredonia
Lund, Harry .....	White
Lunde, Louis .....	Astoria
Rasmussen, S. ....	Brookings

### FARM MECHANICS.

Bratlie, Oscar G. ....	Canton
Brown, Crawford W. ....	Henry
Bruggemann, William E. ....	Marshall, Minn.
Clakins, Herbert R. ....	Bemis
Draper, Harold E. ....	Humboldt
Druse, Elmer .....	Woonsocket
Feathers, Franklin P. ....	Carthage
Gallagher, John V. ....	Alexandria
Gross, Joseph S. ....	Hitchcock
Gross, Rhinehart .....	Hitchcock
Gudehus, Herman .....	Bruce
Hannon, Tommie .....	Brookings
Holsather, Sander .....	Canton
Johnson, Alvin .....	Mt. Vernon
Jones, Horace C. ....	St. Lawrence
Jones, Raymond .....	St. Lawrence
Kammerer, Ernest .....	Rapid City
Klundt, Edward J. ....	Eureka
Kohlrusch, Harry E. ....	Hazel
Larson, Clarence S. ....	Bath
Lucken, Peter .....	Madison
McFarland, George B. ....	Piedmont
McKnight, George .....	Brookings
Mack, Henry P. ....	Castlewood
Millage, Oscar .....	Pukwana
Morris, Hugh R. ....	Brookings
Nord, Oscar .....	Milbank
Nord, Paul F. ....	Milbank
Olsen, Elmer S. ....	Elm Springs
Oyen, Adolph S. ....	Renner

Paulson, Willie L. ....	Centerville
Robbennolt, Ray ....	Delmont
Roe, Benjamin S. ....	Altamont
Schwandt, Arthur ....	Henry
Sellers, Jerome B. ....	Mt. Vernon
Slocum, Wilson B. ....	Wessington Springs
Smedsrud, Joseph ....	Russell
Soukup, George J. ....	Wagner
Steichen, John ....	White Lake
Tolvstad, Harry ....	Mellette

### WAR TELEGRAPHY.

Adams, Olive A. ....	Sioux Falls
Rairey, Gladys ....	Brookings
Bishop, Philo B. ....	Iroquois
Bovee, Earl ....	Sturgis
Erackett, Emma ....	Brookings
Clark, Earl W. ....	Aberdeen
Coughlin, Grace E. ....	Brookings
Crockett, Eldie C. ....	Parkston
Ellerman, Cecil R. ....	Sturgis
Frank, Howard Clifton ....	Sioux Falls
Godrow, Carl David ....	White
Goodwin, Harold L. ....	Mitchell
Irish, Edith ....	Brookings
Junkins, John M. ....	Bryant
McNally, Thomas V. ....	Lead
Martin, Lester L. ....	Brookings
Olson, Reuben F. ....	New Effington
Pederson, Gust ....	Freeman
Radcliff, Clifton D. ....	Wolsey
Sampson, Gladys F. ....	Webster
Sharp, Harold ....	Brookings
Short, Walter J. ....	Marshall
Thomas, Ernest A. ....	Flandreau
Walker, Blanche ....	Brookings

### FARM AND HOME COURSE

December 31, 1917—January 5, 1918.

Abbott, W. E. ....	Sioux Falls
Addison, H. J. ....	Volga
Amundson, Lars ....	Brookings
Aney, Roy L. ....	Peever
Auth, Chris ....	Brookings
Austin, G. W. ....	Brookings
Ball, Bert ....	Chicago, Ill.

Barnett, E. M. ....	Brookings
Barnett, Mrs. E. M. ....	Brookings
Basart, Victor ....	De Smet
Beggs, A. J. ....	Bushnell
Billick, Mrs. L. H. ....	Brookings
Bibby, Irwin J. ....	Brookings
Blecker, H. J. ....	Brookings
Blecker, Henry Jr. ....	Brookings
Bolland, Jens L. ....	Pierpont
Bolles, M. N. ....	Brookings
Bosworth, Ray O. ....	Bruce
Brown, Clive F. ....	Hartford
Bruce, Guy ....	Lesterville
Bruce, L. A. ....	Lesterville
Button, H. L. ....	Brookings
Caldwell, Lyman ....	Brookings
Caldwell, W. A. ....	Brookings
Caldwell, W. A., Jr. ....	Brookings
Carlisle, M. G. ....	Brookings
Carlson, Elsie ....	Minneiska, Minn.
Carnes, A. A. ....	Henry
Catlett, J. W. ....	Brookings
Chenoweth, R. F. ....	Brookings
Christensen, Alfred ....	White
Christensen, Nels ....	Brookings
Clement, Ambert ....	Volga
Cleveland, Charles ....	Toronto
Cobel, G. W. ....	Brookings
Collins, Floyd T. ....	Raymond
Corwin, F. E. ....	Sioux Falls
Corwin, Mrs. F. E. ....	Sioux Falls
Crase, Dorlan ....	Brookings
Crase, Wm. M. ....	Brookings
Crase, Mrs. Laura ....	Brookings
Dawes, H. E. ....	Fulton
De Walt, H. G. ....	Brookings
De Walt, M. M. ....	Brookings
Dixon, George W. ....	Watertown
Dunn, Thomas ....	Stickney
Dunton, H. A. ....	Brookings
Erwin, J. F. ....	Brookings
Faulkner, Mrs. F. W. ....	Aurora
Feind, Ernest ....	Hazel
Fenn, Geogre W. ....	Brookings
Fjerstad, C. C. ....	Brookings
Flittie, G. J. ....	Brookings
Foote, Merle ....	Harrold



Fricke, C. H. ....	Bushnell
Gage, T. E. ....	Groton
Gates, Mrs. F. L. ....	Brookings
Gates, O. B. ....	Brookings
Gilman, G. G. ....	Mission Hill
Ginsbach, Matt ....	Hartford
Gooch, Delmar ....	Brookings
Hanson, Lee ....	Stickney
Harris, George H. ....	Winfred
Harris, M. D. ....	Delmont
Haynes, A. L. ....	Brookings
Haynes, Mrs. A. L. ....	Brookings
Heeren, Arthur ....	Dell Rapids
Henry, George ....	Brookings
Hess, Adam ....	Colman
Hetland, Conrad ....	Montrose
Holmes, Walter ....	Brookings
Hoxing, Oscar ....	Volin
Huchindorf, G. ....	Brookings
Hyde, Hallie ....	Brookings
Iddings, C. C. ....	Volga
Isham, C. H. ....	Rockham
Jensen, Jens K. ....	Brookings
Johnson, G. S. ....	Brookings
Johnson, Leonard ....	Brookings
Joy, J. W. ....	Mitchell
Keck, J. A. ....	Brookings
Kerr, R. F. ....	Brookings
Kleinsasser, Mathias ....	Frankfort
Knappen, G. F. ....	Brookings
Kolsum, Arthur ....	Hammer
Kopperud, Harmon ....	Watertown
Korstad, P. N. ....	Highmore
Landsmann, William ....	Brookings
Landsmann, Mrs. Wm. ....	Brookings
Langdon, W. J. ....	Cody, Neb.
Larsen, Alice ....	Brookings
Larsen, Harold ....	Brookings
Larson, Lewis ....	Langford
Larson, Thorwald K. ....	Brookings
Lawshe, Ben B. ....	Aberdeen
Lee, Mrs. Walter ....	Elkton
Lieran, Mrs. R. H. ....	Brookings
Lunden, Alvin ....	Brookings
Lynch, Elizabeth A. ....	Colman
McCall, Frank E. ....	Brookings
McKee, Ernest ....	Wagner

McKibben, H. B. ....	White
McNeilly, E. E. ....	Wagner
Mears, A. ....	Brookings
Miereness, C. H. ....	Verdon
Merriman, W. L. ....	Brookings
Miller, L. A. ....	Brookings
Mogen, Arthur ....	Summitt
Nelson, A. J. ....	Brookings
O'Hair, E. B. ....	Brookings
Olson, Everett ....	Kirley
Olson, Mary ....	Sioux Falls
Otradovec, Charles ....	Brookings
Palm, A. W. ....	Watertown
Palm, Mrs. A. W. ....	Watertown
Patty, Mrs. R. L. ....	Brookings
Paulson, P. S. ....	Hudson
Perley, George A. ....	Flandreau
Pratt, Mrs. Annie L. ....	Brookings
Prentiss, Zack ....	Brookings
Quail, A. E. ....	Volga
Quail, H. O. ....	Volga
Raak, Bentley ....	Brookings
Raak, J. G. ....	Brookings
Raak, Mrs. John ....	Brookings
Radcliffe, Clifton ....	Wolsey
Reeve, D. W. ....	Bruce
Rilling, Fred ....	Brookings
Risch, John ....	Elkton
Rishoi, Alfred ....	Brookings
Ronning, J. ....	Brookings
Ronning, Oscar ....	Glenham
Rude, N. G. ....	Volga
Sherwood, Aubrey ....	Brookings
Simons, F. O. ....	Pierre
Sloan, James ....	Brookings
Sloan, Sam ....	Brookings
Slocum, Mrs. O. C. ....	Brookings
Snyder, F. J. ....	Bruce
Stenberg, Edwin ....	Roslyn
Soden, Elmer R. ....	Bushnell
Stevens, J. I. ....	Erwin
Stevens, Mrs. J. I. ....	Erwin
Stradance, Charles ....	Brookings
Stroup, John ....	Thomas
Sutherland, Frank L. ....	Eureka
Swanson, Otto ....	Pukwana
Swift, Mrs. A. E. ....	Brookings

Test, A. F. ....	Mitchell
Thornber, James ....	Brookings
Thompson, Theo. ....	Astoria
Toole, M. P. ....	Toronto
Trelstad, Tom ....	Sisseton
Vercoe, L. E. ....	Brookings
Warren, Mrs. J. W. ....	Brookings
Wije, A. R. ....	De Smet
Wije, Mrs. A. R. ....	De Smet
Wood, Milton ....	Pingree, N. D.
Worrall, W. Y. ....	Alpena
Wudel, Edward ....	Parkston
Wudel, Emanuel ....	Parkston
Youngs, Otho ....	Huron
Youngs, Mrs. Otho ....	Huron

## SUMMARY.

1917-18.

## Collegiate—

	Men	Women	Total	Gr. Ttl.
Post Graduate .....	5	0	5	
Seniors .....	21	23	44	
Juniors .....	32	25	57	
Sophomores .....	39	37	76	
Freshmen .....	82	52	134	
Specials .....	14	43	57	
<b>Total Collegiate .....</b>	<b>193</b>	<b>180</b>	<b>373</b>	<b>373</b>

## Preparatory—

Fourth Year .....	9	5	14	
Third Year .....	11	4	15	
Second Year .....	6	3	9	
First Year .....	20	17	37	
<b>Total Preparatory .....</b>	<b>46</b>	<b>29</b>	<b>75</b>	<b>75</b>

Music Students .....	56	87	143	143
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## School of Agriculture—

Fourth Year .....	19	4	23	
Third Year .....	15	7	22	
Second Year .....	42	12	54	
First Year .....	108	33	141	
<b>Total School of Agriculture</b>	<b>184</b>	<b>56</b>	<b>240</b>	<b>240</b>

Summer Session .....	69	136	205	205
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## Short Courses—

Creamery .....	9	0	9	
Farm Mechanics .....	40	0	40	
Farm and Home .....	141	22	163	
War Telegraphy .....	17	7	24	
<b>Total Short Courses .....</b>	<b>207</b>	<b>29</b>	<b>236</b>	<b>236</b>

Grand Totals .....	755	517	1272	1272
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Names Repeated .....	80	117	197	197
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Net Totals .....	675	400	1075	1075
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# INDEX

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	Page		Page
Absences .....	30	Experiment Station .....	13, 126
Adams Act .....	13, 127	Extension Division .....	13, 129
Admission, Conditions of .....	24	Faculty .....	5, 18
Advertising .....	82	Faculty Committees .....	11
Agriculture .....	33	Farm .....	16
Agronomy .....	55	Farm and Home Course .....	123
Alumni, List of .....	136	Farm Mechanics .....	124
Alumni Association .....	136	French .....	75
Animal Husbandry .....	49	General Science Course .....	44
Art .....	21	Graduates .....	159
Assistants .....	5	Grades .....	28
Athletics .....	20	Gymnasium .....	16
Board and Rooms .....	22	Hatch Act .....	14
Botany .....	85	History .....	76
Buildings .....	15	Home Economics .....	37, 61
Calendar .....	2, 3	Horticulture .....	59
Chemistry .....	90	Income, Sources of .....	13
Christian Association .....	21	Instructors .....	5
Civil Engineering .....	43, 70	Jack Rabbit .....	20
Collegian .....	20	Journalism .....	82
Committees .....	11	Laboratories .....	17
Commerce Department .....	112	Languages, Modern .....	75
Conditioned Students .....	29	Library .....	17
Courses of Study .....	33, 47	Literary Societies .....	20
Creamery Work .....	123	Master's Degree .....	31
Credits .....	28	Mathematics .....	83
Dairy Husbandry .....	52	Mechanical Engineerings .....	40, 63
Debating .....	20	Military .....	28, 107
Degrees .....	30	Modern Languages .....	75
Departments .....	49	Morrill Act .....	12, 14
Dormitory .....	23	Music .....	97
Economics .....	76	Nature Study .....	89
Education, Department of .....	80	Nelson Act .....	14
Electrical Engineering .....	67	Oratory and Debating .....	20
English .....	74	Organizations, Student .....	19
Entomology .....	89	Pharmacy .....	47, 93
Entrance Requirements .....	24	Physics .....	84
Equipment .....	15	Piano .....	101
Establishment .....	12	Political Science .....	76
Expenses, Students' .....	22	Postal Facilities .....	17



	Page		Page
Poultry Husbandry .....	50	Station Council .....	126
Preparatory Department ....	115	Steam Engineering .....	124
Public Speaking .....	79	Student Association .....	19
Publications, Student .....	20	Student List .....	159
Regents .....	4, 18	Summer School .....	121
Registration .....	28	Terms and Vacations .....	3
Schemes of Study .....	33	Traction Engineering .....	124
Scholarships .....	24	Tuition .....	21
School of Agriculture .....	118	Uniforms, Military .....	22
Smith-Lever Act .....	13, 14	Veterinary Medicine .....	50
Spanish .....	75	Violin .....	103
Special Short Courses .....	32	Voice .....	99
Special Students .....	28	Zoology .....	87























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